

# Photographic

Magazine

**CAMERAPACKING**  
Take Your Favorite  
Camera On A Hike

**OLD-TIME  
LANTERN SLIDES  
THE MODERN WAY**

**SOMETHING NEW**  
Typewriter  
Texxture  
Screens

**HOW TO SOLVE  
EQUIPMENT CASES**







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50 lenses in-between, Nikkormat  
automatically.**





than  
EL responds,

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Nikon Inc., Garden City, N.Y. 11530. Subsidiary of Ehrenrich Photo-Optical Industries, Inc. (In Canada: Anglophoto Ltd., P.Q.) 328



# Quick!

How many lenses took ALL these shots?



(Answer: One.)



## Bushnell's new 35-105mm, 1/3.5 Macro & Zoom.

This exciting lens gives you the flexibility to design your own shots. Shoot as much—or as little—of a subject as you want. The Macro feature lets you focus as close as  $6\frac{3}{4}$ " from film plane.

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## COVER

This month's cover was photographed by Gary Braasch in the Oregon Cascades to illustrate his story, "Camera-

packing: How to Get Better Shots on the Trail," which begins on page 34. Photo was taken with Nikkormat and 55mm Nikkor lens; exposure was for 1/125 at f/11 on Kodak Kodachrome II Film.





# ON THE SCENE

THE EDITORS

## SUMMER SAFARI



BRAASCH



JOLLY



YOB



DONELSON



ROSENBAUM



NOVAK



NOVAK

June is bustin' out all over—and with this issue PhotoGraphic launches a summer bursting with ideas for enjoying the long, warm days indoors or out. . . .

**Gary Braasch** begins this month's lineup with "Camerapacking: How to Get Better Shots on the Trail." Whether you plan to hike in the woods locally, camp out at the bottom of the Grand Canyon or find a mountain river to navigate, you're sure to find his suggestions practical and inspiring for bringing exciting photographs home from the great outdoors. . . .

Even if your vacation plans don't include a rugged wilderness foray, wherever you go you'll want to pack your camera and accessories in a bag that's portable, sturdy and convenient. Feature Editor **David Brooks** is the most organized traveling photographer we know. "A compartment for everything, and everything in its compartment," might be Dave's motto, and after reading "A Case for Carrying On," we agree—a good case is a wise investment, indeed. . . .

Ever wonder how to save a beautiful photograph where the sky is washed out? **William Jolly** has just the solution for the overhead blahs. "Sky Control With Solarization" describes how to do in the darkroom what you've been attempting to achieve outdoors. Check out the article, and you might find there are some big, billowy cumulus clouds on your photographic horizon. . . .

And while you're in the darkroom, it might be time to improve your lighting setup. In "Darkroom Lighting, Part II," **Parry Yob** describes how to do just that. Your darkroom efficiency is bound to improve if you can see what you're doing. . . .

If your summer months will include get-togethers with friends, family and neighbors, you may want to put together a slide show with transparencies that look like the photographic prints taken in the late 1800s. **Larry Donelson** shows "How to Make Old-Time Lantern Shows" to present while your guests are spooning out the hand-cranked homemade ice-cream. . . .

For unusual party favors, invitations or postcards, East Coast Editor **Steve Rosenbaum** has come up with a new twist—"Typewriter Texxture Screens." Once you get started on this imaginative project, you'll discover there's no end to the creative variations. The materials are inexpensive; the technique is simple, and, best of all, the process is a lot of fun. . . .

On a more serious note, **Ian Dryden's** portfolio documents the impact of war, deprivation and an often bleak environment on the people of Scotland and Northern Ireland. Dryden's powerful images sensitively portray the human condition as the photographer saw it and the people experienced it. . . .

We've saved a very special surprise for last. With this issue PhotoGraphic is happy to introduce a new column, "In Just Seconds." Each month **Joe Novak** will explore all the new developments in instant photography. An excellent photographer and technician, Novak has contributed to other photography magazines in the past, and we're delighted to welcome him to PhotoGraphic's pages. . . .

## COMING NEXT MONTH:

**BICENTENNIAL IMAGES**—A tongue-in-cheek encounter with what's all-American.

**CUTOUT ANIMATION**—Making movies with a few pictures, a pair of scissors and plenty of imagination.

**SIMPLIFIED PRINT TONING**—How to color black-and-white photos in the darkroom—no brush, no paints, no mess.

## PLUS:

**BASIC FILM TESTING PROCEDURES**—How and why to test your film with quality results.

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SUBSCRIPTION RATES: U.S., Military, Possessions, 1 year \$9.00, 2 years \$15.00; Canada, other countries, 1 year \$10.00; 2 years \$17.00. Subscription enquiries, phone (213) 657-5100.

CHANGE OF ADDRESS: Give 6 weeks' notice. Send name of magazine and address imprint from recent issue or state exactly how label is addressed. Send old address as well as new. Mail to PhotoGraphic Magazine, 6725 Sunset Blvd., Los Angeles, California 90028.

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The shutter in an electronic Minolta SLR will respond instantly and automatically to the slightest change in light, even if it happens a split second before you shoot.

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**Minolta XK:** Shutter speeds from 16 seconds to 1/2000th. Interchangeable finders and screens.

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In addition to automatic shutter adjustment, these electronic Minoltas provide every creative option. In automatic mode, you can override the shutter up to two full stops in either direction. Or set



**Minolta XE-5:** A lot of electronic camera, for surprisingly little money.

logically positioned and well organized, so your hands fall into place almost automatically. Harmonized components and functions let you work quickly, while a



**Minolta XE-7:** Its remarkably quiet and velvety-smooth shutter is a whole new experience in fine photography.

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For literature on electronic Minolta SLR's, see your dealer or write Minolta Corporation, 101 Williams Drive, Ramsey, N. J. 07446. In Canada: Anglophoto Ltd., P.Q.

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# NEW MACRO VIVITAR

Traditionally, macro capability is shown by peering into the private life of a grasshopper, or filling the whole frame with a dull picture of a stamp. The new Vivitar 55mm, f2.8 macro lens deserves better. It starts out as a true macro lens. But note, it lets you focus from 1:1 (lifesize) to infinity, *without an adapter*. And it has the speed to replace your "normal" lens in most working situations. We think a bit more lively demonstration is in order. So while the lovely young lady gyrated our photographer took the full figure picture shown here. Then he moved in for a series of true macro still lifes of costume detail, working as close as 8.5" from the film plane. Certainly the new Macro Vivitar is superb for intimate spying on insectivora and makes an ideal copy lens as well. But this light, compact, fast lens doesn't limit you to the usual macro treatments. To experience the remarkable versatility of this lens for yourself, take your camera to a Vivitar dealer and see Macro through your own viewfinder. The Macro Vivitar fits all popular 35mm SLRs including Canon, Konica, Mamiya/Sekor, Minolta, Nikon, Nikkormat, Olympus OM, Pentax screw mount and Vivitar.

Vivitar 55mm  
F2.8 automatic  
macro lens





# OTHER VOICES

## CALCULATOR CONSORTIUM

I found "Calculator in the Darkroom," March, 1976 issue quite interesting. I appreciate the authors' thought processes, as I have been guilty of the same mental gymnastics. You can get so involved with the process that you miss the most obvious solutions.

Just draw a line down the center of the enlarger baseboard. Then draw a parallel line two inches away, another 2-3/4 inches from the center, one four inches, 5 1/2, 8, 11 and 16 inches, if your baseboard is that large.

When the enlarger is set for an 8x10-inch image size, the top of the image should be along the four-inch line, and once you derive your exposure for the 8x10 image, you're all set.

As you move the enlarger up or down, watch the image; each time the image moves from one line to the next, you either double or halve the time or change the lens one f-stop—larger image, more time or light; smaller image, less time or light.

Work it out on a calculator, if you like. Increase the image size by a factor of 1.4 (square root of two), and you've doubled the area that the light must cover and therefore need twice the amount of exposure.

I'm enclosing two tickets to the Nikon School of Photography in the Mid-

west, which is taught by Dave Brady and myself, and cordially invite the two authors to attend. I'm sure we can teach them a few tricks, and they can share a few with us—that's what photography's all about—sharing the knowledge.

Fred Sisson  
Nashville, Indiana

"Calculator in the Darkroom," March, 1976 issue is interesting and informative; however, there are two points which I feel have been overlooked in the article.

The first of these is the use of the computer for converting ounces to milliliters for more accurate measurements of solutions. For example, I use Kodak HC-110 Dilution-B with Kodak Tri-X Film; my tank recommends 10 ounces for one roll of 35mm film and 17 1/2 ounces for two. Since I don't use stock solution B, I use HC-110 1:31. Dividing 32 into 10 or 17 1/2 ounces is more difficult than dividing 517ml (17 1/2 oz.) or 296ml (10 oz.) by 32 to arrive at 16ml HC-110 for 17 1/2 oz. or 9.25ml for 10 oz. The conversion factors are: fluid ounces to milliliters = ounces X 29.5729; milliliters to fluid ounces = milliliters X .0338147.

The other point that I feel was overlooked is a caution: when changing Polycontrast filters, the focus should always be readjusted for the new filter, as there's a slight diffusion through these filters, especially the Nos. 3 and 4. This fact will really make a difference when you're making larger sized prints.

George Hamilton  
West Orange, New Jersey

## Specifications



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# Vivitar®

The Polycontrast filter information which appeared in "Calculator in the Darkroom" (March, 1976 issue) has been revised in the latest Kodak *Darkroom Dataguide*, 5th edition, available in early 1975. The enlarging dial was redesigned to incorporate new speeds for selective contrast papers, and in many cases the filter factor varies from one paper to another.

The new factors are shown in the following table for the convenience of PhotoGraphic's readers.

Kenneth T. Lassiter,  
Director,  
Professional & Finishing  
Publications,  
Eastman Kodak Co.  
Rochester, New Jersey

## KODAK POLYCONTRAST Filter Factors

| KODAK<br>POLYCONTRAST<br>Filter | KODAK Paper     |            |              |                       |           |                             |
|---------------------------------|-----------------|------------|--------------|-----------------------|-----------|-----------------------------|
|                                 | EKTAMATIC SC    |            | POLYCONTRAST | POLYCONTRAST<br>Rapid | PORTALURE | POLYCONTRAST<br>Rapid<br>RC |
|                                 | In<br>Processor | In<br>Tray |              |                       |           |                             |
| None                            | 1.0             | 1.0        | 1.0          | 1.0                   | 1.0       | 1.0                         |
| 1                               | 1.6             | 1.6        | 1.6          | 1.3                   | 1.6       | 1.3                         |
| 1 1/2                           | 1.3             | 1.3        | 1.3          | 1.0                   | NR        | 1.0                         |
| 2                               | 1.6             | 1.3        | 1.3          | 1.3                   | NR        | 1.3                         |
| 2 1/2                           | 1.6             | 1.6        | 1.6          | 1.6                   | NR        | 1.6                         |
| 3                               | 2.0             | 2.0        | 1.6          | 2.0                   | 2.5       | 2.0                         |
| 3 1/2                           | 3.2             | 2.5        | 2.0          | 2.5                   | NR        | 3.2                         |
| 4                               | 6.3             | 5.0        | 3.2          | 5.0                   | NR        | 6.3                         |

(Continued on page 8)



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### OTHER VOICES

(Continued from page 7)

#### POETIC LICENSE

The boys in the back room are saying that your March, 1976 cover is an open and half-shuttered case of comic lepidoptera. The poor little rascal is quite dead or else he is able to flutter without a thorax and whatever lepidopterists call hind legs.

At the very least, it is unsportsmanlike to attack a creature in his apparent condition with a 500mm lens, whatever the motive—self-defense or "self-expression." A monstrous mirror lens vs. a dead butterfly is not exactly what the poet meant by holding a mirror up to nature.

Frank Bez not only "sandbagged" the camera and lens for "stability," he appears to have sandbagged the butterfly and the usually perspicacious editors of PhotoGraphic. I wonder how Frank Bez would look in a dry-mount?

#### Poor Butterfly

How does it feel to be f/8,  
Upon a photographic plate?  
Do you cherish your diurnal,  
In a photographic journal?  
It is a shame you up and died,  
In Kodachrome formaldehyde.  
To illustrate the art of Bez,  
Who shot you in the field, he sez.

Stuart McKelvey

Tiburon, California

P.S. Some of those branches certainly look like shadows of the real thing against a studio backdrop. Yes? No?

Curses, sandbagged again!—Bez



Bez, unable to fly to Taiwan, home of the lepidoptera, on PhotoGraphic's budget, did the next best thing—purchased a specimen from a collector and shot the photo in the field.—Ed

#### DEGENERATE FAN

Having finished reading "Degenerate Art" in the January, 1976 issue by Chris



Butler, I can only conclude that that is why he did it—the butler, that is.

Feeling quite akin to the author, though preferring the "Zerox silennium sopy technique" and feeling that I recognize the fine title inking as appearing on the cover of a leading men's magazine, I would like, at this time, to include a further f-stop in the life of Degenerate Art. Had the author taken the time to copy his final negative on Kodak Kodalith Copy Film and print through two polarizing filters set at 90° angles to each other, the print probably would have been of salable quality.

As a fan of high-grain low-contrast prints, I can also recommend using some additional techniques. First make sure that the print is in the stop bath for only 15 seconds to insure proper impermanence (also cheaper than sepia toner). Then rinse the print in your dishwasher for one full cycle. Make sure there are no pots and pans in the washer at the same time. (Also see "The Elusive Bubble," December, 1975 issue.) Finally, dry the print for .16 second in a microwave oven, and you'll have a beautifully resolved and properly aberrated print of the quality that will make any of your darkroom chaps stop and take notice!

Seriously though, keep up the fine, inspiring work.

Lawrence J. Jobson  
Jamesburg, New Jersey

#### NO BUM STEER

I used to depend on Petersen's *Skin Diver* Magazine to tell me where to buy safe, reliable underwater breathing gear. In diving it's a life-or-death matter that all equipment function perfectly, and *Skin Diver* never let me down. When PhotoGraphic appeared, I bought the first issue and have been a steady enthusiast ever since. Amazingly, the same high standards of ethical advertising and fair reviews of products appear in PhotoGraphic as in *Skin Diver*—although a faulty camera has never killed anyone, to my knowledge.

I never bought a bad product that was advertised in PhotoGraphic nor got a "bum steer" from an article, and this is a commendable fact when compared to some of the other photo magazines. From placing some small ads myself, I have become acquainted with a small cross-section of PhotoGraphic's readers and have found them to be talented, educated, versatile, amazing people—many of whom are famous names in one field or another. I simply cannot recommend PhotoGraphic too highly.

Ed Romney  
Ellenboro, North Carolina

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And besides being smart, the papersafe is tough, too. It's made of lightweight, durable plastic that holds up to 200 sheets of paper. If you have more than one, interlock them. So you can build a stack of 11x14 or 8x10 paper safes. Or a combination of both. There's only one thing better than a Soligor paper safe. And that's a stack of them.

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# GUIDE LINES

PAUL R. FARBER

## BETWEEN A ROCK AND A HARD PLACE



□ It was goodbye to the nonbiodegradable potassium ferricyanide bleach. It was goodbye to processing times that bordered on an hour's duration. It was goodbye to coarse-grained emulsions in favor of much finer grained emulsions. When first introduced, Kodak's sensationally new Type II color negative films were met with immediate and total acceptance by color printing enthusiasts. The radically new films also created an intense darkroom problem for those very same printing enthusiasts.

You see, with the introduction of the new films came a new chemistry, Kodak's process C-41. And with the C-41 process came the need for maintaining a very critical 100°F. processing temperature. Color printing enthusiasts had been caught between a rock and a hard place. Maintaining the critical 100°F. temperature just wasn't that easy. Water baths became a way of life, and a third arm would have been considered a darkroom necessity. One spent more time in preparation for the minutes-long process than was spent in total for the "outmoded" C-22 process.

Ingenious devices, such as Unicolor's Unidrum Film System (with its temperature-jacketed outer sleeve), made life easier. But one still had to raise the temperature of the solutions to the critical 100°F. temperature and then had to maintain the temperature for the duration of the process. In an ambient temperature of, say, 70°, the requirement was easier to say than to do.

Naturally, there were the inveterate experimenters who, unable to maintain the critical 100°F. temperature, believed they could beat the new system by lowering the temperature and extending the development time. To their eternal credit, they tried. However, the nature of the new Type II films is such that one can only anticipate perfect results if the 100°F. temperature is used. Lower temperatures and extended development only cause strange things to happen to the film curves, all of which conspire to produce color negatives from which less

than perfect color prints will result.

Into this merry mess, enter one Patrick Dignan, president of Dignan Photographic, 12304 Erwin Street, North Hollywood, California 91606. As many of you may recall from a reference in this column several months ago, Dignan recently perfected and is marketing a divided color print system. In this system the exposed color print paper is first soaked in a color prebath and then transferred to a color activator, which



Contents of Dignan's NCF-41 kit, seen above, can be used for divided development of Type II color negative films without the need for critical temperature control.

completes the development process (this, of course, is followed by the usual secondary solutions).

The beauty of Dignan's process, aside from the obvious savings to be realized by the reusability factor (the color prebath and color activator can be reused), is the fact that *temperature is not a critical factor!* Dignan then applied his secret process to another area, Type II color negative development, and came up with a working answer to the problem of high temperature processing. Dignan's process NCF-41.

It may sound ridiculous for a grown man to say that he has fallen in love with a developing process, but it's true. For the past few weeks I have been processing all of my Type II color negatives in Dignan's NCF-41 with perfect and repeatable results. And best of all, I have been able to circumvent the critical 100°F. requirement of the Kodak process. I now process all of my color negatives at the Dignan-recommended temperature of 75°F., a temperature that I can easily reach and maintain in my darkroom.

Initially, I must admit that I approached the idea of divided color negative development with a jaundiced eye. In particular, I wasn't too thrilled about the lower temperature of the NCF-41 process. I, too, had tried to develop my color negatives in the Kodak process at

a lower temperature and had fallen victim to my own convictions about time and temperature processing. However, using Dignan's NCF-41 process completely reversed my feelings. My negatives were perfect and so were my prints.

Here's how NCF-41 works: the entire process consists of five chemical steps (with one wash cycle). The five chemical steps are: 1. *color prebath*, 2. *color activator*, 3. *stop bath*, 4. *bleach/fix* and 5. *stabilizer*. First, the exposed film is loaded into a conventional developing tank, and the color prebath, at 75°F., is poured in for three minutes. After three minutes (allowing for a 15-second drain time), the color prebath is poured out and the color activator is poured in for six minutes. After six minutes, the color activator is poured out and the stop bath is poured in for one minute. The stop bath is then poured out, and the bleach/fix is poured in for an additional five minutes.

After the five-minute bleach/fix cycle, the bleach/fix is poured out and the tank opened and placed under running water for five minutes. The final step is to place the now-washed film into the stabilizer for one minute, whereupon the fully processed roll of color negative film is removed from the film reel and hung up to dry in a dust-free place. Total processing time for the NCF-41 process is 21 minutes.

In the Dignan NCF-41 process, the color prebath, bleach/fix and stabilizer are saved and reused for the total capacity of the processing kit. The color activator and stop bath are used once and discarded. Dignan supplies enough liquid concentrates to process 32 rolls of 36-exposure 35mm film or equivalent. The one-quart kit consists of one quart color prebath, two gallons color activator, one quart bleach/fix, two gallons color stop bath and one quart color stabilizer solution.

The cost for a one-quart kit is \$13.80 (outside of continental United States add 10-percent service charge), and when this is broken down, it works out to a respectable 43¢ for each roll.

The low cost factor, coupled with the lack of critical temperature control requirements, plus predictable and repeatable results, have resulted in NCF-41 now being used in industrial and commercial labs, professional darkrooms and schools.

Once again, in case you missed the address, write to Dignan Photographic, 12304 Erwin Street, North Hollywood, California 91606. And while you're at it, inquire about Dignan's divided color print process. Both processes go together like rock and roll. □



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FLASH



# CAMERA ON CAMPUS

ROBERT ROUTH

## SPEAKING OUT ON PHOTOJOURNALISM



□ "The young photographers take themselves much too seriously," commented David C. Henley, Chairman of the Department of Journalism, University of Wyoming. "They are trying to 'do their own thing' as they say; they want to 'be their own man.' Yet, they all look alike, don't they? They have the same style of long hair; they have the same style blue jeans—it's all so uniform—yet they try to be unique and individualistic. Now what does this have to do with photography? I think that the lifestyle of the photographer often affects how he is photographing. I have found that some young photographers who are photographing persons they consider 'straight' may try to photograph them in a bad light and thus editorialize photographically in a way similar to what writing journalists do in advocacy journalism."

Henley is one of the outspoken photojournalism educators I plan to bring to the readers' attention in articles which feature this important use of photography.

Photojournalism is best taught in small classes, accompanied by some experience in the field, according to Henley, who feels it advantageous for second- or third-year students to work for newspapers along with taking classes. Such internships are vital to the realistic education of the student. Also, instructors should stress the importance of getting published as soon as possible, even if it's only in a small bulletin. Assignments have to be realistic—not shooting stationary objects—but accidents, awards ceremonies, happenings at the courthouse. Henley feels that photojournalism education falls down where there is no in-depth adequate supervision of students, where there is no well-constructed program. A good photographer does not necessarily mean the instructor is a good photojournalism educator.

### "SHOT AT, SLUGGED, AND YOU NAME IT"

Henley's experiences as a reporter include covering the erection of the Berlin Wall and the launching of the first Sputnik in Moscow. He has written for dozens of magazines including *Playboy*,

and in his own words, "I have interviewed everybody from Nixon to JFK to Kissinger to Nehru to the kings of Thailand, Afghanistan, Norway and Denmark and have been shot at, slugged and you name it." Perhaps this background explains his insistence on assignments which parallel situations occurring on a working assignment.

Again and again, Henley stresses the value of being published, the importance of taking pictures right from the



start with the idea of selling them to some publication. His personal experiences probably have influenced this strong concern. "I took my first photo for publication when I was 11. I was in China with my parents in the late '40s, just three months before China went Communist and Chiang Kai-Shek fled to Formosa. I shot photos of people starving on the streets of Shanghai, and they were published in a weekly, national student publication. I got \$10 for my efforts."

"Ethics should be taught to photojournalism students just as it is taught in any journalism class," stresses Henley, who believes that photojournalists have an ethical responsibility to present a visually objective picture. He gives as an example the highly unethical past practice of flashing below the face of a suspect, making him look grotesque, often even before he was arraigned.

"I have mixed emotions concerning the state of the photojournalism art today," confided Henley. "I was raised at the end of the Speed Graphic era and worked at the *Los Angeles Examiner* (now the *Herald-Examiner*) early in the '60s; they were starting to bring in the 35mm and 120 cameras. Now people look down on the Speed and Crown Graphics. But I still feel they take the best picture for a four-column cut. Speaking positively, the advent of faster film, the smaller camera and quieter shutter has made it possible to do a lot

that couldn't be done previously. However, I am distressed by photographers so intent on artsy-craftsy approaches, made possible by these recent developments, that you can't recognize the person being photographed. To establish mood is important, but there should be a happy medium. I would like to see a better balance here."

In response to my question about women in the field of photojournalism, Henley stated, "I don't think there is a problem here. If a picture is a good one, no one is going to ask whether it was a man or a woman who took it. Not today."

### "THE HARDEST PICTURE TO TAKE IS THE AWARDS PICTURE"

"I am critical of photographers who feel that the routine shot is beneath them. It takes a great deal of skill to take an awards ceremony and make it interesting. And, after all, the bread-and-butter of the newspapers is the picture of the mayor giving the keys of the city to some politician or a tree-planting ceremony, etc. Also I would like to see some humor in pictures. It seems lacking today."

Concerning photojournalism contests, Henley feels they are important if handled right and not dominated by the sponsoring company or organization. To be effective there should be a major follow-through, with winning pictures being published and acknowledged. Otherwise, it's a waste of time. Photographers are, in many instances, being used. "I can't think of any group in the world more used than photographers. They are used for PR purposes for sponsoring associations, causes, products, communities."

Henley stresses that the qualities necessary to make a good writing journalist are also necessary for the photojournalist. He should be a competent writer as well as a photographer; he should be able to recognize a story and then tell it. He feels the photojournalist should know and understand life and people, and his education in the humanities, social sciences, etc., in addition to photojournalism, should reflect these concerns, giving substance to what is far too often cliché-ridden expression.

Obviously, there is much more to photojournalism than just newspaper photography, a field that is overcrowded, underpaid but highly attractive to many young photojournalism students. For such a student Henley stresses that if he or she can write as well as photograph, there are much better chances for employment.

In future articles I will discuss photojournalism as a total communication concept as it is presently taught in many universities. □





Photo shot using Slave Strobobonar 204 for backlighting; conventional handle-mount unit to light subject from left front.

# How to lose your amateur standing for less than \$135\*.



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The Honeywell Slave Strobobonar 204 is an electronic flash studio light that gives you pro-quality results at feasible cost. So if you want to shoot like a pro, follow this advice . . .

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## That's not all.

To make the 204 completely portable, all you have to do is use our Permacad Power Pak. And you can get extra diffused light with our optional bare tube accessory.

For more information on how you can lose your amateur standing with the Honeywell Slave Strobobonar 204, see your Honeywell dealer or write us: Honeywell Photographic, P.O. Box 22083, Dept. 204-779, Denver, CO 80222.

\*Suggested retail price for the 204 Slave Strobobonar is \$132.50. This may not be the usual or customary price in your area.

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# PLAN

one accessory lens and a camera, you get the highest camera/lens combination rebate, *plus* the rebates for the additional lenses.

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For illustrated literature on Minolta products, see your dealer or write Minolta Corporation, 101 Williams Drive, Ramsey, New Jersey 07446.

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| ROKKOR-X LENSES     | Rebate on lens alone | Rebate on lens with Minolta XE-5 with standard lens | Rebate on lens with Minolta XE-7 with standard lens | Rebate on lens with Minolta XK with AE finder and standard lens |
|---------------------|----------------------|-----------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------|
| 16mm f/2.8          | \$ 30                | \$ 60                                               | \$ 70                                               | \$ 80                                                           |
| 17mm f/4            | 40                   | 70                                                  | 80                                                  | 90                                                              |
| 21mm f/2.8          | 30                   | 60                                                  | 70                                                  | 80                                                              |
| 24mm f/2.8          | 25                   | 55                                                  | 65                                                  | 75                                                              |
| 24mm VFC f/2.8      | 40                   | 70                                                  | 80                                                  | 90                                                              |
| 28mm f/2.8          | 20                   | 50                                                  | 60                                                  | 70                                                              |
| 28mm f/2.5          | 25                   | 55                                                  | 65                                                  | 75                                                              |
| 28mm f/2            | 30                   | 60                                                  | 70                                                  | 80                                                              |
| 35mm f/2.8          | 15                   | 45                                                  | 55                                                  | 65                                                              |
| 35mm f/1.8          | 25                   | 55                                                  | 65                                                  | 75                                                              |
| 50mm Macro f/3.5    | 25                   | 55                                                  | 65                                                  | 75                                                              |
| 80-200mm Zoom f/4.5 | 50                   | 80                                                  | 90                                                  | 100                                                             |
| 85mm f/1.7          | 25                   | 55                                                  | 65                                                  | 75                                                              |
| 100-500mm Zoom f/8  | 75                   | 105                                                 | 115                                                 | 125                                                             |
| 100mm Bellows f/4   | 10                   | 40                                                  | 50                                                  | 60                                                              |
| 100mm Macro f/3.5   | 40                   | 70                                                  | 80                                                  | 90                                                              |
| 100mm f/2.5         | 20                   | 50                                                  | 60                                                  | 70                                                              |
| 135mm f/3.5         | 15                   | 45                                                  | 55                                                  | 65                                                              |
| 135mm f/2.8         | 20                   | 50                                                  | 60                                                  | 70                                                              |
| 200mm f/4.5         | 20                   | 50                                                  | 60                                                  | 70                                                              |
| 200mm f/3.5         | 30                   | 60                                                  | 70                                                  | 80                                                              |
| 300mm f/5.6         | 35                   | 65                                                  | 75                                                  | 85                                                              |
| 300mm f/4.5         | 40                   | 70                                                  | 80                                                  | 90                                                              |
| 800mm f/8           | 75                   | 105                                                 | 115                                                 | 125                                                             |
| 1600mm f/11         | 100                  | 130                                                 | 140                                                 | 150                                                             |

| CELTIC LENSES        | Rebate on lens alone | Rebate on lens with Minolta XE-5 with standard lens | Rebate on lens with Minolta XE-7 with standard lens | Rebate on lens with Minolta XK with AE finder and standard lens |
|----------------------|----------------------|-----------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------|
| 28mm f/2.8           | \$ 10                | \$ 40                                               | \$ 50                                               | \$ 60                                                           |
| 35mm f/2.8           | 8                    | 38                                                  | 48                                                  | 58                                                              |
| 50mm Macro f/3.5     | 15                   | 45                                                  | 55                                                  | 65                                                              |
| 100-200mm Zoom f/5.6 | 20                   | 50                                                  | 60                                                  | 70                                                              |
| 135mm f/3.5          | 8                    | 38                                                  | 48                                                  | 58                                                              |
| 135mm f/2.8          | 10                   | 40                                                  | 50                                                  | 60                                                              |
| 200mm f/4.5          | 10                   | 40                                                  | 50                                                  | 60                                                              |

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# SELF- ASSIGNMENT

BEN HELPRIN

## CUT THE MUSTARD, TRIM THE FAT!



□ Cropping, which means to cut or trim away parts of a photograph in order to improve its pictorial impact, is one of the most effective visual tools available to the photographer. Why, then, with such a simple tool as cropping available, do photo-educators and editors consistently complain that the photographs they see contain too much, rather than too little, visual information? Why are so many photographs undercropped?

The answer to this dilemma lies partially in the working conditions related to certain types of photography. Editorial photographers, for instance, work under tremendous time pressures. Too much is happening; too much is going on at once. Often, the photographer simply doesn't have the time or the opportunity to properly frame the shot in the camera. Even when working conditions are less stringent in terms of time, other technical and conceptual considerations can make demands that distract the photographer and prevent him from effectively framing the shot. When this is the case, however, the photograph could still be cropped to improve the framing and eliminate irrelevant pictorial information. So, again, why are so many photographs undercropped?

Perhaps many photographers share a common weakness. Having spent so much effort in obtaining the image, we (for I include myself in this dilemma) fall in love with every bit of imagery contained in the negative and are loathe to eliminate any of it. A photograph, like a prizefighter, however, is a lot more effective when the fat is pared away. Or, as photo-critic Lisa Norman says, "If you want your print to cut the mustard, you've got to trim the fat!" Thus, this month's self-assignment, which is in two parts:

1. Go through your current "best" photographs (those you now have displayed on the wall or in your portfolio) and, using a large pair of cropping Ls, recrop the picture to heighten its visual impact and eliminate irrelevant pictorial information. If at least a third of your pictures can't be improved in this manner, you're either a genius or are refusing to judge the pictures objectively.

2. Go through your old contact sheets and study the pictures you rejected on the basis that they lacked visual impact. Using a small pair of cropping Ls, see how many of these "rejects" can be imbued with dramatic visual impact through the use of drastic cropping. You may find quite a few rejects becoming prized photographs!



This photograph was originally rejected on the basis that it was compositionally too "busy." Cropping was used to eliminate conflicting, nonrelevant details and produce a more dynamic composition. © Ben Helprin

The following information should prove helpful:

**Cropping Ls:** These are very essential and, fortunately, inexpensive tools. They look exactly like their name (i.e., an L) and can easily be cut out from black posterboard. You'll need a large pair of Ls, with limbs approximately 14 inches long and 2½ or three inches wide for cropping enlargements, and a small pair of Ls, with limbs approximately five inches long and ¾ inch wide for cropping contact prints.

In use, the Ls are laid across one another to form a rectangle. The Ls are then placed over the print and can be moved in and out to vary the size of the rectangle and the subsequently cropped pictorial area. Once the crop has been established, it should be carefully marked on the print by placing a pencil dot at each inside corner of the rectangle.

**Enlarging:** The visual image projected by an enlarger is a negative one. Dark masses appear light, and light masses appear dark. It is unwise to use this negative image for determining cropping decisions because a visually satisfying crop of such a negative image will not necessarily work for the tonally reversed, positive print image. Thus, a positive print should be used to determine cropping. You can crop directly on the contact sheet, but the small image size may prove difficult to work with. Most professionals make full-frame enlargements of their negatives before they decide on final cropping.

**What to look for:** It may help if you think of your picture as a visual sentence. A sentence becomes more effective when excess verbiage is eliminated. A photograph becomes more effective when excess visual information is eliminated. The picture should be trimmed down to the essentials. Anything that is not relevant to the pictorial statement should, if possible, be left out. Only you know the pictorial statement you wish to make and, thus, only you can decide what elements are needed to modify that statement and make it visible. You, and only you, can decide what is visually important, but once you have made that decision, stick to it and don't be sidetracked by superfluous visual frills.

Bear in mind, however, that "tight" cropping is not always the best cropping. Compositional needs must also be considered, and sometimes seemingly irrelevant information is not irrelevant in a spatial context. Again, only you can make this decision but be sure that whatever is included in the pictorial area is there for a reason.

**Format:** In making your cropping decisions, don't be a slave to the 8x10 format ratio (see this column "... And Your Eyes Will Pop Out!" August 1975, for a discussion of this aspect). Long and thin or short and fat can be extremely effective picture formats as well. The pictorial statement, not the arbitrary, predetermined size of a piece of enlarging paper, should determine the format.

Hopefully, this assignment will provide you with some great pictures you didn't know you had. Next month, I'll discuss other methods of eliminating unwanted pictorial detail. Until then, happy cropping! □





## Before you decide which camera system, decide which lens system.

We're not implying that the camera body isn't extremely important. It has a multitude of highly precise functions, all of which must operate perfectly. But the ultimate test of a camera system's quality is the lens system that goes with it. Because in photography, lenses are at the heart of everything.

No single factor outside the photographer is so important to photo-

graphic creativity. And at Canon, no single goal is more important than the creation of lenses that are at the peak of optical achievement.

Canon has been making superb photographic optics for over thirty years. It shows. Current Canon lenses have been universally praised in the photographic press. And one major photographic magazine uses FD lenses as standards against which the perform-

ance of other lenses is measured.

But it isn't enough to build lenses that are merely high in quality. Lenses are needed that do more than transfer the subject clearly onto film. They must alter perspective. Compress distances. Focus closely. Correct distortion. And perform with excellence under abominable lighting conditions. Our series of nearly forty FD lenses does all this, and more.

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# Canon

## INTERCHANGEABLE LENSES

When you buy a Canon SLR, a selection of optics is open to you which is not only uniformly sharp, free from aberrations and high in contrast, but uniform in terms of mechanical quality, color characteristics and—most elusive of all—"feel." There are no "better" lenses in the FD series. All are as near to optical perfection as it's possible to come within their respective focal lengths. We feel that there is simply no better combination in photography than a Canon camera with a Canon lens. And while we're proud of our achievements in the production of camera bodies, we're prouder of our lenses. They require a lot more in the way of careful design and production. And they're the reason so many knowledgeable photographers are getting into Canon. After all, camera bodies are sometimes pretty much alike. But Canon lenses are something else.

### OUR RESOURCES

The name Canon encompasses a family of technologically diverse members, from laser measuring devices to integrated circuit production, television zoom lenses to electronic micromotors. All this technology gives us a very broad base from which to launch new optical breakthroughs in innovative production techniques, novel applications of unusual materials and more efficient functional operation.



Canon's production capabilities alone are a tremendous asset when it comes to quality control and precise manufacture and assembly of lenses—where precision really counts. Compared to the accurate production of other components, the assembly of lenses is many times more delicate. Yet despite this, our quality control is so high that what few lenses don't meet our standards never make it out the door.

All this is not just technical overkill. It has helped us score significant "firsts" and improvements in optics which have materially helped photographers improve their photography. Which is as it should be.

### OUR FEATURES

One of the most important of these improvements is our unique breech-lock lens mount. It's fast, like a bayonet, but better. It's secure, like a thread, but better. Because the lens itself never moves against the camera mount, there is no wear. As the lens is mounted, slack is taken up between it and the body, preserving the very critical flange-to-film distance between lens and focal plane. No matter how sharp the lens or fine the viewfinder/focusing system, your photographs will never be critically sharp (especially at large apertures) without constant, correct flange-to-film distance. With a Canon, you'll always have it.

Our mount has been copied many times by independent lens manufacturers—

not altogether successfully each time. To copy our mount, they must make measurements from existing FD lenses, and machine parts for their lenses based on these measurements. This gives what is, in effect, a "second generation" fit and standard of operation. This, coupled to a quality standard which may not be all that it should be, often results in disappointing performance. It should suffice to say that only a Canon/Canon lens and body combination will give you the kind of quality that is typically 100% Canon.



Essential to the performance of a great lens is its resistance to flare and "ghost" images. This is especially true of more complex, many-elemented wide angles, zooms and high speed lenses. Canon's involvement with multi-coated optics goes back to research conducted in the Fifties, and put into practical use in the Sixties for television and large-aperture motion picture zoom lenses.

Our Spectra Coating is a single-layer coating that has much the same performance as most ordinary multiple coatings. Our Super Spectra Coating is one of the most advanced available. It's interesting to note that not all Canon lenses receive multiple Super Spectra Coating. Only the ones that need it. We simply set a single quality goal for the reduction of flare and ghosts, and use the appropriate coating required to meet this goal in a particular FD lens. The

result, throughout the FD series, is a perfect matching of the right coating to the right lens.

For high performance at close-focusing distances, Canon has incorporated the Floating System of rear elements into many FD lenses, especially wide angles which, because of their retrofocus (reversed telephoto) design are especially prone to spherical aberration at their closest focusing distances. The Floating System is a group of elements that moves independently of the rest of the groups as the lens is focused on a close subject. Image quality is maintained throughout the focusing range.

Our more exotic achievements have set new standards in lens design. Optical engineers, for instance, had known for years that elements made from calcium fluoride ("fluorite") crystals would be excellent for combating chromatic aberrations in long lenses. But until Canon found a way to actually "grow" crystals large enough to be made into lens elements, it couldn't be employed. Now, our FLUORITE lenses are prized by professionals and serious amateurs alike for their near-apochromatic color rendition, light weight, compactness and increased sharpness in black-and-white—a natural fringe benefit of increased sharpness in color.

We've also found a way to make aspherical lens surfaces with precision on a large-scale basis, where previously they had to be ground and measured by "hand." Aspherical surfaces open up new horizons for high-speed lens design, because they largely eliminate problems such as coma and spherical aberration which have always hampered the design of effective super-speed lenses. Our new series of ASPHERICAL FD lenses is nothing short of amazing in terms of performance in any light at any aperture at any distance from the subject. And while they aren't inexpensive, they are significantly less costly than if conventional production methods were still required. These lenses are state-of-the-art in almost every respect.

Our innovations and refinements extend into all areas of lens production and design, mechanical as well as optical. The new FD 400mm f/4.5 S.S.C. lens has internal cam focusing, rather than the traditional helical thread type. Because of this, size and weight can be reduced, and the length of the lens stays constant through the entire focusing range.

Our precision construction of the complex moving systems of elements in our zoom lenses, combined with their superior optical quality, makes them mechanically durable as well as optically excellent. In a zoom, without one, you can't have the other. It's a comforting thought that during normal use a good bump won't put your zoom out of commission.

That's our story. We've taken technical innovation, sound design and dedication to quality and produced what we (and a lot of others) think is the finest series of lenses ever made for photography. If you're a Canon owner, you know it's true. If you aren't, borrow a friend's. You'll find out it's true!



## CANON LENS GROUPS

### FISH EYES

Both Canon Fish Eye lenses are superb performers, offering sharpness, built-in filters and unusual compactness. They're ideal for impact as well as scientific and technical uses.

Fish Eye 75mm f/5.6 S.S.C.



Fish Eye ED 15mm f/2.8 S.S.C.

### SUPER WIDE ANGLES

Lenses like these were only a dream a few years ago. In edge-to-edge definition, they yield to no lenses. This focal length range is in increasing demand by all photographers, from fashion to architectural.

FD 17mm f/4 S.S.C.



FD 24mm f/2.8 S.S.C.



FD 20mm f/2.8 S.S.C.

FD 24mm f/1.4 S.S.C. Aspherical

### WIDE ANGLES

The Wide Angles are the workhorse lenses of the professional and amateur alike. Ours aren't only sharp, but they're so free from distortion that they can be used as "normal" lenses that simply get more into the picture.

FD 28mm f/2 S.S.C.\*



FD 35mm f/2 S.S.C.



FD 28mm f/2.8 S.S.C.

FD 35mm f/3.5 S.C.

TS 35mm f/2.8 S.S.C.

### STANDARD LENSES

Canon's Standard lenses can do almost anything well. They're great for general photography because of their good depth-of-field and exceptionally wide aperture range.

FD 50mm f/1.8 S.C.



FD 55mm f/1.2 S.S.C.



FD 50mm f/3.5 S.S.C. Macro w/Extension Tube FD 25

FD 50mm f/1.4 S.S.C.

FD 65mm f/1.2 S.S.C. Aspherical

### TELEPHOTOS

This group of lenses is famous for its compactness and optical excellence. Our telephotos give maximum image quality without accompanying bulk or complexity. Outstanding for sports, portraits and studio photography.

FD 85mm f/1.8 S.S.C.



FD 100mm f/2.8 S.S.C.



FD 85mm f/1.2 S.S.C. Aspherical\*

FD 100mm f/4 S.C. Macro w/Extension Tube FD 50

FD 135mm f/3.5 S.C.

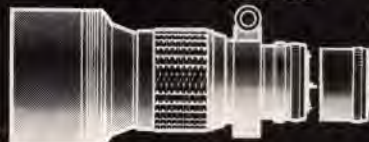


FD 135mm f/2.5 S.C.

FD 200mm f/4 S.S.C.

FD 200mm f/2.8 S.S.C.

FD 300mm f/2.8 S.S.C. Fluorite w/Extender FD 2x\*



FL 300mm f/5.6 Fluorite

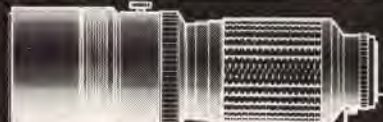
FD 300mm f/5.6 S.C.

### SUPER TELEPHOTOS

You can tell the quality of an entire lens line by the quality of the Super Telephotos. Ours are winners all the way. Many of them have caused a mild sensation in the world of professional photography.



FD 400mm f/4.5 S.S.C.\*



FL 500mm f/5.6 Fluorite

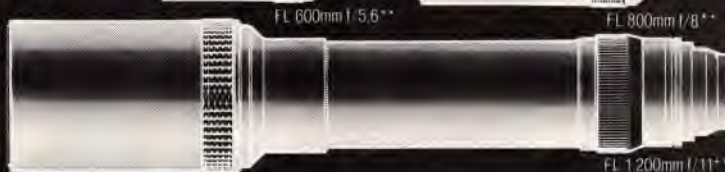
FL 400mm f/5.6\*\*



FL 600mm f/5.6\*\*



FL 800mm f/8\*\*

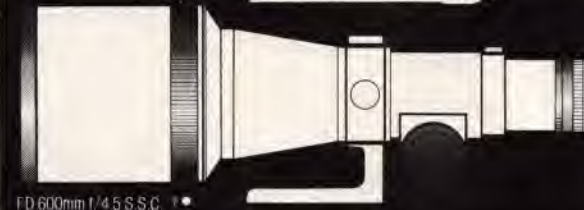


FL 1200mm f/11\*\*



Focusing Unit

FD 600mm f/4.5 S.S.C.\*



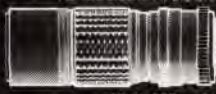
FD 800mm f/5.6 S.S.C.\*



### ZOOMS

There's no point in making a mediocre zoom. Ours are optically incredible, with fine sharpness, contrast and evenness of illumination. They can be used with confidence in any application.

FD 100-200mm f/5.6 S.C.



FD 35-70mm f/2.8-3.5 S.S.C.



FD 85-300mm f/4.5 S.S.C.





## CANON FD LENSES COMPARISON GUIDE

| Lens                                              | Angle of View | Minimum Aperture | Closest Focusing Distance | Filter Size   | Length | Weight   |        |     |        |
|---------------------------------------------------|---------------|------------------|---------------------------|---------------|--------|----------|--------|-----|--------|
|                                                   |               |                  | m ft.                     | (mm)          | (mm)   | in.      | g      | lb. | oz.    |
| Fish Eye 7.5mm f/5.6 S.S.C.                       | 180°          | f/22             | fixed focus               | 6 built-in    | 62     | 2-7/16   | 380    | —   | 13-1/2 |
| Fish Eye FD 15mm f/2.8 S.S.C.                     | 180°          | f/16             | .3 1                      | 4 built-in    | 60.5   | 2-3/8    | 485    | 1   | 1      |
| FD 17mm f/4 S.S.C.                                | 104°          | f/22             | .25 10"                   | 72            | 56     | 2-3/16   | 450    | 1   | —      |
| FD 20mm f/2.8 S.S.C.                              | 94°           | f/22             | .25 10"                   | 72            | 58     | 2-1/4    | 345    | —   | 12     |
| FD 24mm f/2.8 S.S.C.                              | 83°           | f/16             | .3 1                      | 55            | 52.5   | 2-1/8    | 330    | —   | 11-1/2 |
| FD 24mm f/14 S.S.C. Aspherical                    | 84°           | f/16             | .3 1                      | 72            | 68     | 2-11/16  | 500    | 1   | 2      |
| FD 28mm f/2.8 S.C.                                | 75°           | f/22             | .3 1                      | 55            | 49     | 1-15/16  | 280    | —   | 10     |
| FD 28mm f/2 S.S.C.*                               | 75°           | f/22             | .3 1                      | 55            | 61     | 2-3/8    | 343    | —   | 12     |
| FD 35mm f/3.5 S.C.                                | 64°           | f/16             | .4 1'6"                   | 55            | 49     | 1-15/16  | 280    | —   | 10     |
| FD 35mm f/2 S.S.C.                                | 64°           | f/22             | .3 1                      | 55            | 60     | 2-3/8    | 370    | —   | 13     |
| TS 35mm f/2.8 S.S.C.                              | 64°/79°       | f/22             | .3 1                      | 58            | 74.5   | 2-15/16  | 545    | 1   | 3      |
| FD 50mm f/3.5 S.S.C. Macro w/Extension Tube FD 25 | 46°           | f/22             | 20.5 cm                   | 8-3/8"        | 55     | 59.5     | 2-5/16 | 310 | —      |
| FD 50mm f/1.8 S.C.                                | 46°           | f/16             | .6 2                      | 55            | 44.5   | 1-3/4    | 255    | —   | 9      |
| FD 50mm f/1.4 S.S.C.                              | 46°           | f/16             | .45 1'6"                  | 55            | 49     | 1-15/16  | 305    | —   | 11     |
| FD 55mm f/1.2 S.S.C.                              | 43°           | f/16             | .6 2                      | 58            | 52.5   | 2-1/16   | 510    | 1   | 2      |
| FD 55mm f/1.2 S.S.C. Aspherical                   | 43°           | f/16             | .6 2                      | 58            | 55     | 2-3/16   | 575    | 1   | 4      |
| FD 85mm f/1.8 S.S.C.                              | 29°           | f/16             | .9 3                      | 55            | 57     | 2-1/4    | 430    | —   | 15     |
| FD 85mm f/1.2 S.S.C. Aspherical*                  | 29°           | f/16             | 1 3.5                     | 72            | 71     | 2-3/4    | 750    | 1   | 10-1/2 |
| FD 100mm f/2.8 S.S.C.                             | 24°           | f/22             | 1 3'6"                    | 55            | 57     | 2-1/4    | 360    | —   | 12-1/2 |
| FD 100mm f/4 S.C. Macro w/Extension Tube FD 50*   | 24°           | f/32             | .45 1'6"                  | 55            | 112    | 4-3/8    | 530    | 1   | 2-3/4  |
| FD 135mm f/3.5 S.C.                               | 18°           | f/22             | 1.5 5                     | 55            | 83     | 3-1/4    | 465    | 1   | —      |
| FD 135mm f/2.5 S.C.                               | 18°           | f/22             | 1.5 5                     | 58            | 91     | 3-9/16   | 630    | 1   | 6      |
| FD 200mm f/4 S.S.C.                               | 12°           | f/22             | 2.5 8                     | 55            | 133    | 5-1/4    | 675    | 1   | 7      |
| FD 200mm f/2.8 S.S.C.                             | 12°           | f/22             | 1.8 6                     | 72            | 140.5  | 5-1/2    | 700    | 1   | 8      |
| FD 300mm f/5.6 S.C.                               | 8°            | f/22             | 4 13                      | 58            | 173    | 6-13/16  | 1,125  | 2   | 7-1/2  |
| FD 400mm f/4.5 S.S.C.*                            | 6°            | f/22             | 4 13                      | 34mm w/holder | 282    | 11-1/8   | 1,300  | 2   | 14     |
| FD 35-70mm f/2.8-3.5 S.S.C.                       | 64°-31°       | f/22             | .3° 1°                    | 58mm          | 120    | 4-3/4    | 575    | 1   | 4      |
| FD 100-200mm f/5.6 S.C.                           | 24°-12°       | f/22             | 2.5 8                     | 55            | 173    | 6-13/16  | 765    | 1   | 11     |
| FD 85-300mm f/4.5 S.S.C.                          | 29°-8°        | f/22             | 2.5 8                     | series IX     | 243    | 9-9/16   | 1,695  | 3   | 7-1/2  |
| FD 300mm f/2.8 S.C. Fluorite w/Extender FD 2x*    | 8°            | f/22             | 3.5 12                    | 34mm w/holder | 230    | 9-1/8    | 1,900  | 4   | 3      |
| FL 300mm f/5.6 Fluorite                           | 8°            | f/22             | 4 13                      | 58            | 168    | 6-11/16  | 850    | 1   | 14     |
| FL 500mm f/5.6 Fluorite                           | 5°            | f/22             | 10 33                     | 95            | 300    | 11-13/16 | 2,700  | 5   | 15     |
| FL 400mm f/5.6**                                  | 6°            | f/32             | 4.5 15                    | 48**          | 338    | 13-15/16 | 3,890  | 8   | 9      |
| FL 600mm f/5.6**                                  | 4.1°          | f/32             | 10 33                     | 48**          | 448    | 17-5/8   | 5,000  | 11  | —      |
| FL 800mm f/8**                                    | 3.1°          | f/32             | 18 60                     | 48**          | 508    | 20       | 5,360  | 11  | 13     |
| FL 1200mm f/11**                                  | 2.1°          | f/64             | 40 130                    | 48**          | 853    | 33-9/16  | 6,200  | 13  | 11     |

\* Macro focusing capability to 30cm (1 ft.) from film plane.

\* Must be used with Focusing Unit. Specifications include Focusing Unit.

\* Filter is of insertion type with holder.

• New Lens

## NEW CANON FD LENSES

### FD 28mm f/2 S.S.C.

This new Canon FD lens offers more speed to the photographer for added ease in focusing and more flexibility in low light. It is a completely new design, intended to give unusually good illumination from edge-to-edge, as well as reduced flare at all apertures. As a general-purpose wide-angle, it is almost impossible to fault.

### FD 85mm f/1.2 S.S.C. ASPHERICAL

Newest of our trio of ASPHERICAL lenses, this optic fills a very important need for the photographer who needs outstanding image quality not only in poor light, but at all apertures and distances. In terms of quality and performance, it is simply unmatched.

### FD 100mm f/4 S.C. w/Extension Tube FD 50

This new macro lens is the famous FLM 100mm f/4 Bellows lens mounted in a focusing mount for infinity to 1:2 operation without Extension Tube FD 50 and to 1:1 with it. Its perfect for general-purpose telephoto use and ideal for macro work, since it permits greater camera-to-subject distance, allowing for critical lighting set ups or frisky subjects.

### FD 400mm f/4.5 S.S.C.

It has opened the way for a whole new generation of super telephotos. Internal cam focusing makes it extremely light and compact, especially for its high speed. Because of the cam focusing arrangement, lens length

remains constant from infinity to its closest focusing distance—making it much easier to hand-hold.

### FD 300mm f/2.8 S.S.C. FLUORITE w/Extender FD 2x

The reception for this lens has been nothing short of phenomenal. Its now redesigned, lighter, smaller and offering full FD mechanical operation. Coupled to the Extender FD 2x (made specifically for this lens) it offers an unbelievably compact 600mm f/5.6 shooting combination. Naturally, its FLUORITE construction makes it unsurpassed in optical capability.



# POINT SOURCE

STEVEN ROSENBAUM

## PHOTOGRAMS— A REAL "HANDS-ON" TECHNIQUE



□ A photogram is an abstract image, usually a shadow outline of objects placed on or near a piece of photographic paper. The objects can be opaque or translucent, and the exposing light source can be anything from a flickering match to brilliant sunlight (usually, however, an enlarger is most convenient). Once the paper is exposed and processed, the photogram which results is a one-of-a-kind abstraction that more closely resembles the interconnecting tones of a Rorschach test than a conventional photograph. Of course, high contrast film (like Kodak Kodalith Ortho) can be substituted for the paper. This produces a film photogram that can be printed to produce any number of identical photograms. The film photogram also enables you to produce photograms with reverse tonality (white backgrounds with black silhouetted shapes, instead of black backgrounds with white silhouetted shapes where the objects do not allow the material to receive exposure).

During the first half of this century, photograms were taken more seriously, and these techniques were explored by some leading photographic artists as an important use of the photographic medium. Today, of course, photograms are taken much more casually. Photograms are routinely produced by just about every novice photographer who discovers for the first time that his or her hand is opaque and that it will produce an easily recognizable silhouetted outline. Some of the most commonly used items for making photograms include natural subjects such as leaves, feathers and flowers, as well as man-made objects like keys, coins and chains.

Traditional variations of the photogram technique include the use of three-dimensional objects and exposure to multiple-light sources. The former, of course, will produce images of varying sharpness and density depending on the varying distances from parts of the object to the paper, and the latter will yield conflicting and often interesting cross-shadow effects. Texture can be

added to the photogram by placing a piece of woven cloth or lace on top of the paper during exposure.

Materials necessary to produce photograms are very basic. Any photographic paper and normal processing solutions will do; in fact, making photograms is a good way to use out-of-date and stray sheets of paper that may occasionally accumulate on the bottom of your paper safe. Paper contrast is not impor-

tant, since the exposure the paper receives will either produce a maximum density (black) or minimum density (white) depending on the photogram being made.

So much for the basics, but there's much more to making photograms than you may think. A logical extension of the purely black-and-white photogram is a combination print which combines the best of both techniques—conventional printing and photograms. Photo No. 1 shows a very symmetrical photogram produced by exposing the paper with a series of 12 identical round metal disks or independent "printing masks." Carefully remove one disk at a time, exposing the area beneath the disk to a negative in the enlarger, then replace the disk; repeat this process until all the areas have been exposed. Photo No. 2 shows the effect of this technique; in each instance, the easel was rotated in a slightly different direction.

Of course, each of the secondary exposures could have been made from different negatives, and/or each of the 12 masked areas could have been of different shapes. This would enable you to produce a photo montage capable of recording a related sequence of events, such as the month-to-month growth in a child's first year of life. Another variation of this technique is as follows: After the initial photogram has been made, all of the opaque objects are removed, and *one* enlarged exposure is made from a negative over the entire sheet of paper. The area surrounding the objects has already received maximum exposure, and thus it will appear to isolate portions of the newly exposed image in a surrounding border of black. At the same time, the one image will appear to be broken up into a series of many images, taking up the shapes of the opaque objects. The illusion produced is quite effective, as can be seen in photo No. 3.

One final note involving illusions—photograms are usually made without the need for lenses, cameras, etc. As a result, most photograms yield *contact-sized* images of the objects selected. If you have a means of supporting the object, however (i.e., a glass negative carrier), small translucent items or opaque items with recognizable shapes can be placed in the enlarger and a photogram produced from the *projected* image. Thus, household pliers, for instance, can take on mammoth proportions; this projected image can also be combined with life-sized items placed directly on the paper surface. If your setup does not enable you to accommodate a large object in the negative stage, then make a contact photogram on film, as described, and then project the film image to produce out-of-scale images. □



1. In its simplest form a photogram merely records a shadow pattern of objects placed on the paper during exposure.

2. This image uses the photogram pattern of photo No. 1, as well as a series of 12 different exposures carefully printed, in register, to produce a combined print.

3. Rather than making 12 separate exposures, as in photo No. 2, this shows the effect of combining a photogram image with one negative, printed into the otherwise unexposed area.



# WHERE THE ACTION IS

DAVID SUTTON

## RIP-OFFS, PART II



□ Last month I made it quite clear that participants in photo contests risk losing ownership of any highly prized photographs they might enter in contest competition because of a rule where-

by: *All entries become the property of the particular company handling the contest.*

Some contest packagers soften the blow by wording the rule to read: *"All winning entries become the property of..."* On the other hand, some contest rules contain the following legend: *"Entries will be returned provided they are accompanied by a self-addressed stamped envelope."* On the surface it would appear that this last rule at least assures you the return of your material, however, this one also has a catch to it.

In the case of self-addressed, stamped envelopes, be absolutely certain that your return address is legible and make sure it appears on both the front and back of the submission. Also be sure you have affixed at least half again as much postage as required. In other words, if return postage is \$2, place \$3 worth on the envelope. Why? Because postal rates have been increasing by leaps and bounds, and it is conceivable that from the time you send your entry until such time that your material might be returned to you, there may be a six-month lapse, during which time the postal rates may have gone up again. If this becomes the case, you will have insufficient postage on your return mailing envelope.

The size of your return envelope is another thing to consider. Obviously, it should be of sufficient size to accommodate your entry. You should protect your entry by including two pieces of corrugated cardboard mailers. However, you can't rely on the contest people at the other end to go to the trouble of using the same cardboard, particularly when you consider that they are dealing with thousands of submissions.

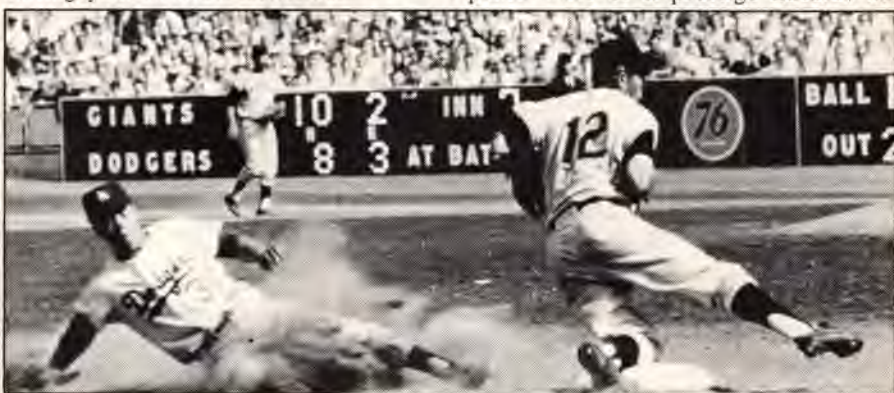
Ideally, the packaging of your entry should be as follows—one envelope containing your entry, including at least two cardboard mailers to protect the contents. Seal the package, placing your name and address on it and mark it *entry*. Enclose an identical envelope and cardboard mailers on which you place more than enough postage and mark it

*return to*, followed by your name and address (repeat same in upper left-hand corner of envelope or on back side) and leave the envelope unsealed.

Now you should have two envelopes, one containing your entry and one for return mailing. Place both envelopes in another envelope large enough to accommodate both of them. This method is the best I can think of to insure having your material returned.

and recognition that may accompany your possible winning—that's one thing. If, however, you become a contestant in the belief that a major win will spark your future as a professional, you can just about forget it! *One great shot doth not a professional make.*

In my professional lifetime I have only entered one contest—a competition sponsored by Eastman Kodak. The prizes were of a prestige nature, no



Maury Wills' 104th stolen base has netted me about \$7000 to date. The color photo won top award in a "no-strings attached" Eastman Kodak competition. If you had taken this picture, would you enter it in a contest and risk losing all rights of ownership? © David Sutton

I might add here that another commonly used rule states: *So and so company accepts no responsibility for loss, theft, damage or safe return of entries.* That being the case, if you follow the mailing guidelines I've suggested, you can at least minimize the various dangers of the photo contest syndrome.

If you are reluctant to send an original slide (and you should be), you can beat the rap of contest rules and regulations by sending a duplicate in its place. A good custom lab or Eastman Kodak can provide you with a quality dupe at a reasonable cost. Should you be notified that your entry has been selected for the grand prize or one of the runner up awards, you can then decide the worth of the prize as opposed to the potential worth of your entry and whether you are willing to relinquish it—possibly forever!

The award to you might only be a \$20 gadget bag or a \$7 camera strap. Nevertheless, no matter the prize, you and you alone are the only one who can decide whether you are willing to hand over all rights to what may be a highly coveted and salable photograph.

The number of first or grand prize winners who have gone on to fame and fortune are definitely more the exception than a rule. Some contests are only for amateurs, whereas some are only for professionals, and others are for all comers. The mere fact that you win a contest is no guarantee that you will be able to launch yourself into a career as a professional photographer. In short, if you enter a contest just for the hell of it in the hope of latching onto one of the bigger prizes—plus a bit of the fanfare

cars, expensive cameras, vacation trips, etc., yet I entered for two reasons: 1. There were no tricky or small-print rules with which to contend. 2. My entry, a dupe color slide, was unique, since it was a one-and-only exclusive color shot of Maury Wills during the peak of his 104th stolen base. I figured it to be a cinch bet to win.

My shot was beamed toward the sports action category, and about three months later I was notified that I had won top honors. I had to send the original slide, since it was needed to make a 4x6-foot translucency for hanging and display at the New York World's Fair 1964-1965. I sent the original slide by registered mail, and it was returned to me within a few weeks.

For my efforts I was awarded a handsome and rather large medal, an attractive Certificate of Achievement and a \$100 Honorarium from Eastman Kodak. They never used my picture for advertising or promotion. They only used it for exhibition and display. I retained all rights to my entry, which to date has netted me about \$7000 in sales. Now wouldn't I (or you) have been an idiot to have entered this photo in a tricky rule-ridden contest and possibly lost all rights to it?

I must admit that in spite of my warnings, there will be many of you who will enter one or more photo contests. In that case all I can do is suggest you *carefully* read the rules and regulations, and then if you still insist on sending off an entry, follow the guidelines I have outlined. It will help take the sting out of things in the event you get ripped-off. □





## 8 out of 10 top professional photographers entrust their talents to Hasselblad. Here's why.

A market research survey team asked a representative sample of top commercial photographers in major markets around the country: "Which brand of medium format camera do you presently use in your work?" Eight out of ten said Hasselblad. And they named Hasselblad ten to one over the next leading brand.

Such overwhelming favoritism is based on good, sound photographic reasons. Here they are:

### **Reliability**

Every piece of Hasselblad equipment is built tough, for professional use. Hasselblad's legendary reliability is confirmed by its continuing use in NASA space missions since 1962. Quality control is rigorous and thorough. Every unit goes through shutter tests (500 shots). Random samples are rapid-fired up to one million exposures at the rate of 2,500 shots per hour.

### **Flexibility**

Hasselblad's three cameras are designed to meet most all photographic challenges a professional is likely to encounter. Hasselblad evolves new equipment under two criteria: Always anticipate the professional's needs, and never cause his Hasselblad system to become obsolete. Hasselblad now offers 14 lenses, 9 film backs, 9 view-finders and over 200 accessories. All work perfectly with every Hasselblad body built since 1957.

### **Results**

The professional photographer demands outstanding results day in day out. The rugged Hasselblad system—with its superb Carl Zeiss optics and versatile 2¼-square format—delivers those results without compromise. To meet the boldest photographer's challenge.

### **Precision**

Now, as in the last twenty-five years, Hasselblad craftsmanship, durability

and performance are legendary. The secret: precision in design, manufacture, testing and servicing. Hasselblad sets its own rigorous standards of quality. For example, most tools and instruments used in building and testing a Hasselblad are themselves designed and manufactured by Hasselblad. Hasselblad insists that these steps are necessary to maintain the finest quality in what is, virtually, a hand crafted camera.

### **Cost**

As any professional soon discovers, "getting by" is a precarious philosophy when one's livelihood and reputation are at stake. In the long run, the best investment costs the least. Hasselblad proves this. It saves time. It saves work. It saves repair bills. It saves trading up (obviously). It always delivers! In fact, that's why eight out of ten top professional photographers entrust their talents to Hasselblad.

**H A S S E L B L A D**

The system preferred by the serious photographer.



# IN JUST SECONDS

JOE NOVAK

## WHAT'S IN IT FOR YOU?



□ It's sad, but for many photographers there comes a time when the photographs stop looking new. Pictures become numbers on a roll that has no beginning and no end. Over the years, almost imperceptibly, a cataract has clouded what had once been a fresh and joyful vision. What happens? The power of the photograph to instruct and delight somehow becomes diffused and confused by lesser goals. We fool ourselves into believing that what we had wanted all the time was to become expert photo-technicians. Faces and trees and clouds cease, somewhere along the line, to be objects of our wonder and love and become, instead, test patterns in the search for the "ultimate negative." Now I don't deny that a negative can be beautiful, but when I lie on my back in the grass, it's *clouds* I want to see floating around up there!

For others, the world of motor drives, integrated analyzers, zone systems and ultimate systems ultimately becomes too much to handle, and they return, with some regret, to watercolors. They receive an overdose of both technology and elitism, and if that's what photography's all about, they want no part of it. I don't blame them. However much one loves the darkroom, and I certainly count myself among those who do, it is a fact that many people will never acquire darkroom skills consistent with their vision. Some (gasp!) don't even *want* to. Yet the expressive potential of photography needn't be denied those who have neither the inclination and aptitude for darkroom work nor the bread to hire someone who does. The beauty of an instant photographic process is that it removes technical barriers in the way of a person's desire for self-expression. The fact that technology has accomplished this liberation is particularly satisfying.

In this respect, the Polaroid process is a democratic one. It encourages the development, and just as importantly, the continued exercise of an aesthetic sensibility in large numbers of people who are frightened off by the technical component of conventional photography. It has been shown that the quality of pho-

tographs made with Polaroid materials is commensurate with that obtainable by conventional means; thus, it is easier than ever before for the average person to let his sense of beauty take a tangible form.

Yet it would be a mistake to imagine that the advantages of an instant photographic process are limited to the unskilled. The experienced photographer stands to reap even greater rewards, be-



Some of my friends are big enough to demand a little extra depth of field, and I hate to let my friends down—Type 107 film, E.I. 3000, 1/30 at f/8, in available light.

cause his knowledge enables him to realize in the process the fullest potential, both of the film and of himself. He will learn even more from the first picture than will the beginner. He will exploit the characteristics of individual films to achieve an even stronger, more personal visual statement.

It is the quality of the film that presents one of the strongest arguments for an increased interest on the part of the serious photographer. Polaroid offers a wide selection of films with qualities that are unique in photography. They are desirable in their own right as appropriate tools for a special quality of expression. For the same reason that you might have a preference between Kodachrome and Agfachrome, you may want to utilize the specific interpretive qualities of Polacolor. Many fine photographers have. For example, Art Kane, Ansel Adams, Marie Cosindas and Emmet Gowin have found in Polaroid film a medium for their expression. Their vision is diverse; yet they are united by excellence. The brilliant new metallized dyes that were developed for the SX-70 system are now incorporated in Polacolor pack and sheet films. Not only are these new dyes the most stable and fade-resistant in photography, but the current Polacolor films are setting

new standards for color print sharpness. The film has become so good that advertising photographers who once used Polaroid for exposure and lighting evaluation are now using it for the final product. You've seen some pretty expensive ads in national publications that not only were shot on Polaroid film but engraved directly from the originals.

One of Polaroid's standard emulsions has an ASA equivalent of 3000. Without "pushing," you get three stops more speed than Kodak Tri-X Film affords, and the grain is remarkably fine. Imagine putting some of that film into a high quality camera and shooting in available light. The creative possibilities are exciting to contemplate!

For the photographer who desires great resolution and elegant tonalities in his prints Type 105 is the answer to his prayers. Not only does it provide a beautiful, fine-grain print, but it also delivers an instant large-format negative with a resolution of 150 line pairs per millimeter. What easier way could there be to produce negatives for huge, high quality blow-ups?

The owner of a 4x5 camera can use all of these instant films and *more*. Type 52, for example, is a 400 ASA-equivalent emulsion available in 4x5 sheets that produces images of astoundingly gentle gradation and beauty. I don't shoot it to save time. It is simply one of my favorite black-and-white films. Having the finished print in seconds is frosting on the cake but *what frosting!* The professional also has at his disposal special-effects films such as the ultra-high-contrast Type 51 in 4x5 sheets.

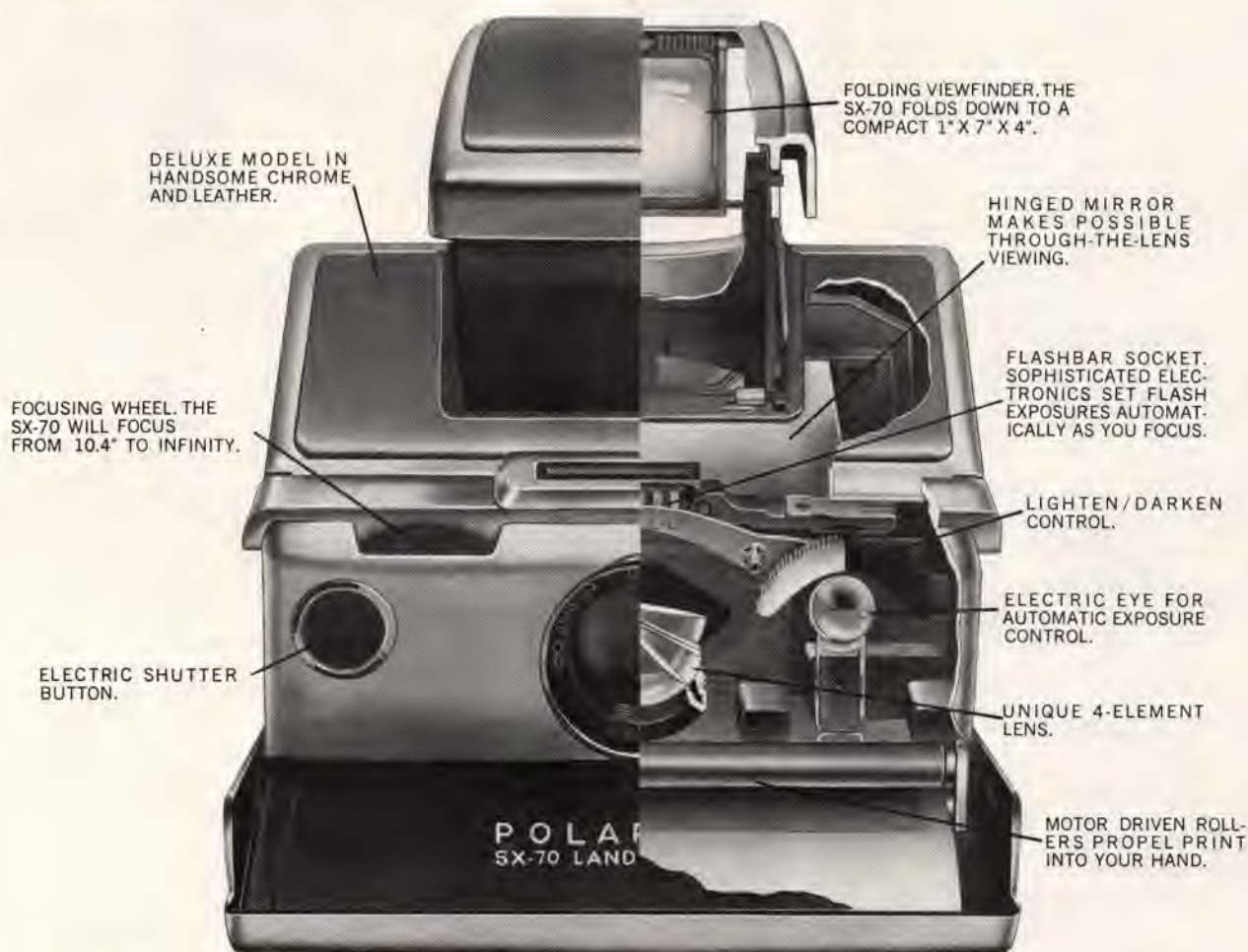
Instant photography has come of age. Polaroid backs are not only available for press and view cameras but for a number of medium-format cameras as well. The return of the professional Polaroid pack film camera has been welcomed. The model 195, with its sharp f/3.8 lens and fully manual aperture and shutter controls, affords the serious photographer the capability to work creatively within the medium.

One final bit of news. Besides rejoicing over all of this splendor from Cambridge, we may look forward to some goodies from Rochester. When Kodak finally enters the instant-photography field, things are going to get interesting. If you're not excited at this point, you might as well just wait for the bomb.

In the months ahead I'll explore creative working techniques to help you get the most out of your instant films, evaluate equipment, talk about pictures and make occasional forays into some very unusual areas. I guarantee that it will be an exciting as well as informative excursion. □



# Polaroid's SX-70: Half the wonder is what it does. Half is how it does it.



Half the wonder of the SX-70 is in the picture itself. A brilliant color photograph that develops in daylight, in minutes, before your eyes.

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The deluxe SX-70 Land camera is the most revolutionary camera Polaroid has ever made. Inside, well over 100 inventions (each unique to the SX-70) function with but one purpose. To let you concentrate on the picture in your mind instead of the camera in your hand.



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## CLUB CLOSE-UPS

JOAN YARFITZ

### NEW VISTAS FROM AN OLD FRIEND



□ Several months ago (see March, 1976 issue) I began a quest for effective and informative programming material for camera clubs. Since that time, I've received scores of letters from representatives of camera clubs, councils, federations and associations recommending various resources for club programs. The letters keep arriving, and I'd still like to hear more opinions and suggestions from readers, but in the meantime I'll begin to share with you what I've learned thus far.

Almost universally mentioned by all correspondents was the PSA. The Photographic Society of America has been in existence since 1934 and is an extraordinarily active, yet loosely knit group of over 17,000 individual members and over 1200 camera clubs, representing close to 60,000 individuals throughout the United States and the world. Its basic credo is to foster and promulgate the advancement of photography, and it accomplishes this goal by sponsoring and creating numerous services, events and programs.

Very simply, the PSA works like this: there are two types of membership, individual and group. Any individual interested in furthering his photographic endeavors can join PSA for \$17.50 a year, plus a nominal \$2 initiation fee (one-time charge only); camera clubs and/or group membership costs \$15 for a group of 50 or less, \$20 per year for more than 50 members (plus \$2 initiation fee). Membership includes affiliation with any of eight separate divisional categories—color slide, motion picture, nature, photojournalism, pictorial print, stereo, techniques and photo travel. If you desire affiliation with more than one of these divisions, an additional \$1.25 is charged for each new category joined.

Once you're a member, a plethora of activities opens. The PSA is constantly engaged in a whirlwind of special events, competitions, exhibitions, programs and services. In addition to all of this, you'll receive free the monthly *PSA Journal* as well as the quarterly *PSA Supplement*. The *Journal* lists news of each division's activities and publishes gorgeously illustrated special features and articles, covering new trends

in photography as well as detailed descriptions of photographic techniques. The *Journal* also reports news of import to members, listing competitions and exhibitions and includes names of winners in each category.

Each new *Supplement* contains an alphabetical "PSA Membership Directory" which updates names and addresses of officers, committee members, regional representatives and individual mem-



As a PSA member, you'll receive both the *PSA Journal* and *Supplement* to keep you current on organizational affairs.

bers throughout the world. It also features a separate "Camera Club Section" filled with program aids, suggestions and specific items of interest especially outlined for club members.

If all of this still hasn't convinced you that PSA is a *must* for all photo enthusiasts who want to keep abreast of current photo happenings, when you hear its list of member services, I'll guarantee you'll become an instant and devoted *aficionado*. I'll mention a minimum of these services, just to whet your appetites. "Around the World with PSA," a tape/slide show presenting the work of top photographers from all over the world and a collection of exhibition prints from winning portfolios of the F.I.A.P. (International Federation of Photographic Art) are both made available to clubs for fascinating evenings of programming. The *Camera Club Information Desk* and *Camera Clubs Committee*, information and action task forces, are alert to introducing more advanced programs and services.

Dozens of information *pamphlets* on club organization and operational procedures and activities can be ordered from PSA headquarters. *PSA chapters* are located in regional locales throughout the world and provide outstanding programs and opportunities for clubs at a grass-roots level. The *Club Bulletin Advisory Service* and the *Club-Council Bulletin Competition* both assist clubs in publishing the best possible newsletters; the former gives a personal analysis and



recommendations for improving club bulletins, while the latter evaluates and awards prizes and ribbons to the finest and most effective presentations. The *Speakers Referral Listing* is provided free to clubs and lists experts in special fields who are available for lectures, teach-ins, conventions, conferences and seminars. There are over 100 lectures, slide shows and movies available from this resource alone. Over 40 tape/slide programs covering a wide range of how-to-do-it topics featuring outstanding photographers are also accessible for a nominal fee.

In addition to all of this, each division has an exhaustive list of separate services for participating members, individual and group. For example, the Color Slide Division offers an international slide competition for individuals; it is held five times a year and gives members the opportunity to compete with other highly qualified workers from around the world. Instructional slide sets with taped commentary demonstrate what makes a slide successful and illustrate how to photograph special subjects under a variety of conditions.

The Motion Picture Division sponsors annual film competitions for both individual and group members, makes available a film library of over 100 individual titles and has a judging service. The Photojournalism, Photo Travel, Pictorial and Stereo divisions each offers unique programs geared to participants' specialties. The Techniques Division offers several unusual opportunities for members; the first is the *Techniques College*. All a member need do to take advantage of this service is to ask a question of an expert in the field; just write a letter and receive a complete, detailed, personal reply. Next are the *Capsule Instruction Sets* for individual members and the *Tape/Slide Talks* for groups. Both are rich in technical information in the fundamentals as well as advanced techniques and are accompanied by booklets which viewers can keep for future reference. *Experimenters' Study Groups* give participants the opportunity to share experience, information and photographic skills in such diverse areas as color slides, print study and photochemistry. The group concern is on mastery of technique and equipment. Last is the *Sound Workshop*, which provides information on all types of audio techniques and audiovisual presentations.

As you can see, the photographic scope of the PSA is all-encompassing. If your imagination and curiosity are now sufficiently piqued, you can discover more about this most unique organization by writing PSA Headquarters, 2005 Walnut Street, Philadelphia, Pennsylvania 19103. There's a whole new world just waiting for your arrival. □

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## FOCUS ON FILMMAKING

MARKENE KRUSE-SMITH

### ESSENTIAL TERMS



□ Essential to understanding any art, science, sport or hobby is a familiarity with the special expressions and terms used to communicate concepts. Like every profession and special interest, filmmaking has evolved its own particular language. If you're already familiar with the terms used in still photography, it's not difficult to pick up moviemaking terminology. To paraphrase Gertrude Stein, a lens is a lens is a lens.

The following terms will provide an elementary vocabulary of filmmaking jargon. Once you know the lingo, you'll find communication with labs and other filmmakers will be a whole lot simpler, and movie books and periodicals will make a lot more sense. Therefore, in the interest of increased edification and enlightenment, I'll present the following list of essential terms.

#### MOVIE BASICS

The basic parts of a film are the *frame*, the *shot* and the *sequence*, so I'll begin by defining these terms.

**Frame**—One individual picture on a strip of motion picture film. Frame also means to compose a shot or, when projecting a film, to bring the limits of an individual picture on the film into coincidence with the limits of the projector aperture.

**Shot**—A single run of the camera or the piece of film resulting from such a run. When the camera is started, some film is exposed; when the camera is stopped, one shot has been made.

**Sequence**—A series of shots that conveys a particular action, characterized by unity of theme and purpose.

#### METHODS OF TRANSITION

In order for a film to progress smoothly and make sense to viewers, there are several ways to move from one shot to another or from one sequence to another. The transition can be made with a *cut*, *fade*, *dissolve* or *focus-shift*.

**Cut**—An instantaneous change from one scene to the next. The term is also used to stop operation of the camera, action, and/or sound recording equipment, as when a crew is filming and the director calls out, "Cut!" Cut also means to sever or splice the film when editing.

**Fade**—A *fade-in* is the gradual appearance of a scene from a darkened screen. A *fade-*



out is the gradual darkening and disappearance of a scene to black on the screen. This optical effect can be done by a lab or in the camera by exposing the film so that each successive frame receives a systematically greater exposure than the frame



ILLUSTRATION BY THOMAS ALLISON

preceding it—for a fade-in—until full normal exposure is attained. The procedure is reversed in the case of fade-outs.

**Dissolve**—Also called *lap-dissolve*. A gradual transition in which the end of one scene is superimposed on the beginning of a new one. This optical effect can be accomplished by a lab or in camera by gradually fading out the first scene, then rewinding the film and gradually fading in the second scene. A dissolve is a soft transition, often used to indicate the passage of time, to move from reality to unreality or to indicate a dream or recalled memory.

**Focus-Shift**—You can approximate a dissolve in camera by beginning the sequence with the image completely out of focus, then by focusing in on the subject as the shot progresses. A sequence might be ended by throwing the scene completely out of focus as the shot ends. By ending the first shot out of focus and beginning the next shot out of focus, you can make an in-camera dissolve.

#### CAMERA MOVEMENTS

One big difference between a professionally made film and a home movie is that the pros put the camera on a tripod whenever possible to avoid the jerky, unintentional kind of camera movements that give amateur movies that shaky-hands-at-home look. Professional movie tripods often have fluid heads so that camera movements can be executed smoothly. But if you're using a good still photography tripod, you can loosen the controls and practice making smooth camera movements on a few dry runs before actually exposing any film, trying to make the motion as steady as possible. The basic camera movements are the *pan*, *tilt*, *zoom*, *dolly*, *trucking* and *crane*.

**Pan**—Short for *panorama shot*. A horizon-

tal movement by the camera, usually from the pivotal point of the tripod. To "pan with the action" is to follow the subject's movements by swiveling the camera around horizontally to keep the subject in frame.

**Tilt**—A vertical pan; a pivotal camera movement in a vertical plane.

**Zoom**—The camera remains stationary, but the focal length of the lens is smoothly adjusted to go from wide-angle to telephoto or the reverse to either *zoom-in* or *zoom-out*. The shot is made with a *zoom lens*, which is standard equipment on most super 8 movie cameras. A zoom lens has a variable focal length and is capable of simulating the effect of the camera's movement to or from the subject.

**Dolly**—To move the camera toward or away from the subject while shooting a scene. Instead of pivoting, the camera remains locked in place on the tripod, and both camera and tripod are moved along the ground. A homemade dolly can be improvised by pushing the cameraman and camera around on a wheelchair, moving the chair toward or away from the action as necessary.

**Trucking**—To move the camera along with a traveling subject, usually parallel with the subject, by means of a dolly. The purpose is to pace and maintain the size of moving subjects.

#### MISCELLANEOUS

**Audio**—All matters pertaining to sound or to sound recording.

**Camera Speed**—The rate of film advancement, expressed in frames per second (fps). *Sound speed* refers to the standardized speed of filming and projecting at 24 frames per second when picture is synchronized with a sound track and applies to films of all gauges.

**Cinematic Time**—A condensation or extension of actual time for the purposes of drama, by means of cinematographic techniques.

**Double-System Sound Recording**—Synchronous shooting system in which the sound is recorded on a tape or film separate from the film in the camera.

**Follow Focus**—To change the focus setting of a lens as a scene is being photographed to keep a moving subject in focus.

**M.O.S.**—Filming without sound (silent). Term comes from early days of cinema, when immigrant German technicians spoke of shooting "mit out sound."

**Raw Stock**—Film that has not yet been exposed and/or processed.

**Single-System Sound Recording**—A technique of recording synchronous sound simultaneously with the picture on the magnetic track adhering to the edge of a picture film. □



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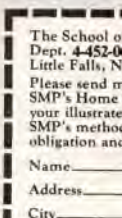
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## 110 PHOTOGRAPHY

KALTON C. LAHUE

### CAPSULE COMMENTS ON THE NEWEST 110 MODELS



□ When this column began in March 1975, I mentioned that new equipment and techniques would be subjected to a complete field test before bringing them to your attention.

Unfortunately, there's much more to say about 110 photography than a single page per month can accommodate, and so many of my evaluations and recommendations have been incorporated in the recently published Petersen's *110 Format Photography*, a volume in the *How-To PhotoGraphic Library* devoted to the tools and techniques of the pocket-camera enthusiast. But new 110 cameras continue to appear almost monthly, and letters continue to arrive asking my opinion of them. Given monthly space limitations and the increasing amount of new equipment being announced, it seems impractical to devote each and every column solely to cameras, so here and now I'm going to catch you up to date with capsule commentaries on the new offerings of five manufacturers, a technique I'll use occasionally to keep you current while we discuss other topics of interest.

#### MINOLTA POCKET AUTOPAK 200, 250, 270

Recently introduced as its "Bicentennial" series, Minolta offers little new but window dressing—the Pocket Autopak 50 and 70 models have been given a slightly different exterior trim and a hot shoe at one end to accommodate the clip-on Pocket Flash 25, otherwise all specifications remain the same as do the electronic shutter range and programming. The new 200 model uses the same f/8 lens in a two-zone focusing mount and has a two-speed mechanical shutter and electronic flash capability via the hot shoe. Magicube sockets have been retained, allowing you to really blast light into those distant shots. Unless you specifically want the EF feature, the Autopak 50 and 70 models are now offered at highly attractive prices, and as regular readers of this column know, I consider the Minolta line one of the best.

#### CANON 110ED, 110E

On the market for some months now, this highly sophisticated 110 has met with considerable success—production began with some 20,000 per month, a figure that has doubled recently. The 110ED offers a host of welcome features including a superb five-element focusing f/2 lens capable of far more than current 110 films can deliver, an aperture-priority exposure system with electronic shutter from eight to 1/500



Back row, left to right—Canon 110ED, Kodak Trimlite 48 with Ektron B EF, Kodak Tele-Instamatic 608 with GE Flipflash. Front, left to right—Vivitar 604, Copal Pocket 400, Minolta Pocket Autopak 250 with Pocket 25 EF.

second and a date-imprinting device. Although fairly heavy for its size (you should see how ingeniously they've packed everything inside), this is perhaps the ideal camera for the serious 110 enthusiast who does his own processing/printing—don't expect commercial labs to give you anywhere near the quality of which this lens is capable. For those satisfied with an equally superb f/2.7 lens and zone focusing, Canon offers the 110E at a somewhat lower price.

#### KODAK TRIMLITE INSTAMATIC 18, 28, 38, 48

Read these as Kodak Pocket Instamatic 10, 30, 40 and 60, cut off the electronic shutter at 1/30 second on the 28, 38 and 48, redesign the flash system to accept only the new GE Flipflash or Kodak Ektron EF, revamp the shutter button to lower the pressure required to trip it, then dress the results in a brown finish, and you have the new Kodak line in a nutshell. The most significant of the four, the Trimlite 48 contains the same exposure programming method, but the shutter's low end is now 1/30, and the aperture closes to f/19.5 instead of f/17.5. Accessories such as auxiliary lenses designed for the previous Kodak 50/60 will not fit the Trimlite 48 because of a slanted instead of the flat-glass lens cover.

#### KODAK TELE-INSTAMATIC 608

Fastest-selling of the new Kodak pocket line, the 608 incorporates two



single-element f/11 lenses, one 25mm normal and one 43mm telephoto (equivalent to a 50mm and an 85mm for a 35mm camera) and a two-speed (1/45, 1/125) shutter. A selector switch atop the 608 swings the desired lens in place and changes the finder field to match that of the lens. Optical quality of the two lenses is quite good; the camera is compact and accepts either Flipflash or the Kodak Ektron EF unit.

#### COPAL 300, 400

The smallest 110s presently available both share the same specs except for fixed-aperture lens—the 300 uses a fixed-focus 28mm f/9.5 and the 400, a two-zone 28mm f/8. Powered by a six-volt cell, electronic shutter range is four to 1/450 second, Magicube socket and EF hot shoe are provided, and a bright-frame finder includes parallax marks, low-light lamp and used-cube mark. The compact graphite-loaded ABS case is lightweight (5½ ozs.), and fitted with a tripod socket but lacks provision for a cable release. In use, the lens delivers sharp pictures; the camera performs smoothly, and its small size is a definite asset when compared to the single-aperture, electronic shuttered 110s available.

#### VIVITAR 600, 604

I like the Vivitar 602 very much, and now that the line has expanded with two more 110s using built-in EF, Vivitar seems to have the field covered. The 602 used a fixed-focus 23mm four-element f/4 lens which stopped to f/11 for outdoor shots, but its EF was a bit too strong for subjects at closer distances. The new 604 uses a less powerful EF (256 vs. 400 BCPS), resulting in a GN of 20-percent less (32 vs. 40). A third position added to the EF switch permits use of the 604 for close-up flash in the two-to-five-foot range, as the aperture remains at f/11—an improvement that makes me even fonder of it than the 602. The less-expensive 600 is equipped with a three-element 24mm f/8 lens for both daylight and flash work. Both lenses are surprisingly sharp and provide a wider field of view than most optics fitted to pocket cameras.

All of the cameras discussed here have been in my hands and in use for several months now, and I can heartily recommend them all as worthy of consideration regardless of which set of features or price range appeals most to you. Despite what you may have read elsewhere, don't give up on the rumored 110 with built-in zoom lens capability—it's coming in July—but in the meantime, the models available now will let you take advantage of the rapidly moving state of the art. □

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# Photographic's SPEC SHEET

**LENS:** Soligor C/D 45-150mm  
f/3.5 Macro & Zoom



**ANGLE OF VIEW:** Min. 16°, max. 51°  
**NUMBER OF ELEMENTS:** 13  
 elements in 11 groups  
**ACCESSORY SIZE:** 67mm  
**APERTURE RANGE:** f/3.5 to f/22  
**FOCUSING RANGE:** 4.3 feet (1.4 meters) to infinity in telephoto mode, 7.9 inches (200mm) in macro mode  
**CLOSE FOCUS MAGNIFICATION:** 1:5 in macro mode, 9X to 3X in telephoto mode  
**DEPTH-OF-FIELD SCALE:** Yes  
**INFRARED FOCUS MARK:** Yes  
**LENS COATING:** Multicoated  
**WEIGHT:** 32.4 ozs. (900g)  
**FINISH:** Black anodized  
**LENGTH FROM FRONT TO FLANGE, AT INFINITY:** 5.3 inches (140mm)  
**MAXIMUM BARREL DIAMETER:** 2.76 inches (70mm)  
**CLICK STOPS:** Full and half-stop detents  
**ROTATION DIRECTION FROM INFINITY TO CLOSE-UP, IN USE:** Depends upon lens mount  
**BUILT-IN LENS HOOD:** None  
**SPECIAL FEATURES:** Rubberized focusing grip, interchangeable lens mounts make lens adaptable to a variety of SLR cameras  
**MOUNTS AVAILABLE:** Canon FD, Konica T and A, Minolta, Olympus OM, Nikon, Pentax, Miranda EC  
**PRICE:** \$395 with case, front and rear lens caps  
**DISTRIBUTOR:** AIC Photo, Inc., Carle Place, New York 11514

**LENS:** Soligor C/D 35-105mm  
f/3.5 Macro & Zoom



**ANGLE OF VIEW:** Min. 23°, max. 63°  
**NUMBER OF ELEMENTS:** 13  
 elements in 11 groups  
**ACCESSORY SIZE:** 72mm  
**APERTURE RANGE:** f/3.5 to f/16  
**FOCUSING RANGE:** 4.9 feet (1.5 meters) in telephoto mode, 8.2 inches (209mm) in macro mode  
**CLOSE FOCUS MAGNIFICATION:** 1:5 in macro mode, 7X to 2.1X in telephoto mode  
**DEPTH-OF-FIELD SCALE:** Yes  
**INFRARED FOCUS MARK:** Yes  
**LENS COATING:** Multicoated  
**WEIGHT:** 24.5 ozs. (700g)  
**FINISH:** Black anodized  
**LENGTH FROM FRONT TO FLANGE, AT INFINITY:** 3.9 inches (99mm)  
**MAXIMUM BARREL DIAMETER:** 3 inches (75mm)  
**CLICK STOPS:** Full and half-stop detents  
**ROTATION DIRECTION FROM INFINITY TO CLOSE-UP, IN USE:** Depends upon lens mount  
**BUILT-IN LENS HOOD:** No  
**SPECIAL FEATURES:** Rubberized focusing grip, interchangeable lens mounts make lens adaptable to a variety of SLR cameras  
**MOUNTS AVAILABLE:** Canon FD, Konica T and A, Minolta, Olympus OM, Nikon, Pentax, Miranda EC  
**PRICE:** \$450 with case, front and rear lens caps  
**DISTRIBUTOR:** AIC Photo, Inc., Carle Place, New York 11514

**LENS:** Soligor C/D 70-220mm  
f/3.5 Macro & Zoom



**ANGLE OF VIEW:** Min. 11°, max. 34°  
**NUMBER OF ELEMENTS:** 5  
 elements in 12 groups  
**ACCESSORY SIZE:** 72mm  
**APERTURE RANGE:** f/3.5 to f/22  
**FOCUSING RANGE:** 4.3 feet (1.4 meters) in telephoto mode, 1 inch (25mm) in macro mode  
**CLOSE FOCUS MAGNIFICATION:** 1:1.45 in macro mode, 1.4X to 4.4X in telephoto mode  
**DEPTH-OF-FIELD SCALE:** Yes  
**INFRARED FOCUS MARK:** Yes  
**LENS COATING:** Multicoated  
**WEIGHT:** 44.4 ozs. (1200g)  
**FINISH:** Black anodized  
**LENGTH FROM FRONT TO FLANGE, AT INFINITY:** 7.2 inches (183mm)  
**MAXIMUM BARREL DIAMETER:** 3.25 inches (82.5mm)  
**CLICK STOPS:** Full and half-stop detents  
**ROTATION DIRECTION FROM INFINITY TO CLOSE-UP, IN USE:** Depends upon lens mount  
**BUILT-IN LENS HOOD:** Yes  
**SPECIAL FEATURES:** Rubberized focusing grip, interchangeable lens mounts make lens adaptable to a variety of SLR cameras, one-touch zoom and focus ring  
**MOUNTS AVAILABLE:** Canon FD, Konica T and A, Minolta, Olympus OM, Nikon, Pentax, Miranda EC  
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All photos taken with a Nikkormat camera and Nikkor lenses; exposures on Kodak Kodachrome II film were by through-the-lens meter.

1. Scale of this foggy scene on Mt. Suhsan was emphasized with a Nikkor 28mm lens.

2. A low angle emphasized the scale of the rocks. Photo taken with a Nikkor 55mm lens.

3. Unusual foliage and scenic background on this ridge near Mt. Hood were photographed with Nikkor 28mm lens and polarizing filter.

4. A 55mm Micro-Nikkor captured this close-up.

5. This beautiful view in the North Cascades of Washington was photographed with a Nikkor 28mm lens.

# CAMERA PACKING

## how to get better shots on the trail

by gary braasch



## CAMERAPACKING

**E**ach weekend the woods are filled with backpackers. An entourage of nature lovers and escapees from the smoggy, overcrowded cities converges on wilderness areas to enjoy the great outdoors. Among the hikers and campers are a good number of photographers, many of whom feel the shots they return with are somehow unimaginative and predictable.

It's possible to bring excitement to backpacking photography through the application of a few simple techniques. With proper preparation and some good ideas in mind *before* your trek, you'll have the right equipment with you and the best approach in mind to record all the experiences of backpacking when you're on the trail. The photographs you bring back will evoke memories of a wonderful trip as well as ideas for future photographic expeditions.

Preparing for hiking photography begins when the trip itself is planned. While you're poring over maps and guidebooks, make note of the scenery you'll be seeing and the location of possible vistas. You can previsualize angles and locations. Check out histories of the area as well as published photos and textbooks; they can give valuable insights into special highlights like large glaciers, routes of explorers, record-sized trees and possible viewpoints.

### WHAT TO PACK

Along with choosing food and equipment, think about what camera gear you want to take along. Make sure it is clean and in good repair. I study the trail route, plants, animals and geology. A forested region, for example, has many tiny plants and less light; so you'll want to bring a macro lens and fast film. Alpine areas lend themselves more to grand vistas and sensuous rock and snow formations. The weather forecast is important, too. Make note of all this information. Do it right on the map if you want to, so it will be at hand when you need it. Also make a list of unusual shots or conditions you might encounter so you'll be prepared with appropriate equipment and film.





Talk to your companions about photography. Are they taking cameras? Will they want shots for their collections? Will they help you by posing occasionally or even hiking a short stretch a second time so you can be sure of a good angle?

If you want a complete record of the adventure, the pretrip planning and packing can be documented. Common stock clichés show happy hikers at the trail head or a layout of the gear on a poncho. You can do better than that! Show equipment being stowed inside the pack. How about shooting through the car windshield at departing hikers? A wide-angle view might emphasize all the weight of those packs. Other shots will come if you challenge your ability to tell the story anew.

How much film should you take? I've been on two-week mini-expeditions with friends who had to search for shots on the last day to use up the one roll they brought. On the other hand, if you're a pro shooting for *National Geographic*, 2500 frames during a three-or four-day outing might not be too many. The practical answer lies somewhere in between. Experience and familiarity with the destination will help you judge what's best for you. One or two rolls per day might be a good place to start. Keep spare and exposed film double wrapped in plastic or cannisters stuffed deep inside your pack to protect the film from moisture and heat.

## BE READY

If you have enough film, the real secret of complete backpacking photography is to have your camera ready at all times and be ready to use it. Take it out of your pack and hang it around your neck on a wide strap or hang it over the top of the pack frame



1. Dewdrops on wet meadow grasses highlight close-up taken with 55mm Micro-Nikkor lens to emphasize the magic and beauty of the world at ground level.

2. Low angle and slight underexposure to compensate for the bright, white snow combine to make this shot effective. Lunchtime and other rest stops afford ideal opportunities for photographing one's companions. Photo taken with 50mm lens and polarizing filter.

within easy reach. To keep the camera from banging around you can make a waistband from a length of elastic and two snap hooks. Even simpler is to loop a piece of tire tube through your belt and pull it over the lens to hold the camera snugly against your stomach. There are commercial rigs on the market, too. Keep a plastic bag handy to ward off rain or dust.

I supplement my ever-ready camera with a fanny pack worn in front, stuffed with extra film, lenses, filters and cleaning supplies. It's also a handy place to keep a map and notebook. With all my gear right in front of me there is no excuse for missing a shot. The freedom from having to get into my pack every time I want to change lenses or get a fresh roll of film is really welcome. I sometimes even sprawl on the ground to bring a tiny flower into close-up—with my pack still on my back. (The only trouble is that it's very hard to get up again.)

For many hikers the urban penchant for speed and constant motion carries over into the wilderness. Not only does unwarranted haste on the trail cause blisters and sore muscles, it is antithetical to photography and nature appreciation. You can't cruise down the path at three miles per hour and expect to see very much. My advice is to *slow down*. Don't be too impatient to explore a rocky brook for possible

shots of bubbling water. Take time to see all the angles of a wilderness view. Relax and await a bumblebee's arrival on an aster. With guidebooks and maps along you can learn much while you fill roll after roll with the best nature shots you've ever made.

Walking slowly, indulging your artistic or scientific impulses will probably put you in the rear of your party. When you get into camp at last or catch up, you'll want photos of everyone. A lot of backpacking pictures I've seen are either scenics with a body thrown in haphazardly or straightforward shots of odd-looking characters standing self-consciously around some tents and packs. Oh yes, there are also photos showing backpacks with legs trucking down the trail.

The key to breaking out of these tired molds is anticipation. You're a backpacker. You know what backpackers do. Be there when they do it. Map reading, pitching camp, cooking, viewing scenery, talking over tomorrow's route, waiting out the rain, slipping down a muddy trail, finding an edible plant, airing a sleeping bag, crossing a snowfield, checking out some rocks, being tired, waking up, reading by the fire—these are all interesting activities to photograph. If you're a cross-country skier or a mountain climber, you can probably come up with even more activities to anticipate with your camera.

Find angles and juxtapositions that add to the information in each shot. Wide-angle lenses let you move in to feature one person while showing the surrounding scene. Portraits taken with a 105mm lens can show the strains and joys of outdoor life. Telephotos bring that mountain right down into camp, the way it seemed. Get above, below, inside, outside, around, away from and right next to your campsite and see how your images come alive. Be alert for shots when you're hiking, too; switchbacks offer excellent high- and low-angle views as do bridges. Try silhouetting your companions as they traverse a scenic pass. Watch for dramatic weather effects to liven standard views that would otherwise be dull.





## CAMERA PACKING



1. An approaching storm in the Cascades was photographed with a Nikkor 55mm lens.

2. The cloud formation was the inspiration for this photo. Nikkor 28mm lens provided coverage and depth of field needed.

3. A tripod-mounted camera was used to take advantage of the sun's angle on these rolling snowfields in Washington.

4. This early morning close-up was captured with a 55mm Micro-Nikkor lens.







## CAMERAPACKING

In order to get a good portrait you may occasionally have to pose your friends. Getting a natural appearance isn't easy. The people must be part of the overall composition, not just bodies. And they should be in action or natural positions. So the idea is to pick an interesting background scene, get your "models" climbing, setting up a tent or even taking a photo themselves, and shoot. Experiment often and don't spare the film.

### HELPFUL ACCESSORIES

Some special pieces of gear and unusual techniques can help you create magnificent backpacking photographs. A waterproof camera housing will let you get right into a mountain lake or waterfall. Split close/far filters are very useful, so are neutral density filters—they can cut the light and allow motion to blur even in bright sunlight, giving you time and movement as added elements of style. Polarizing filters, longtime standbys for cutting reflections and darkening skies, do extra duty for me. I use them to accentuate snowcapped peaks, as standby neutral density filters and to protect lenses in emergencies.

Zoom lenses, camera blur and panning with moving subjects can add excitement to many shots, especially in mountain climbing, Nordic skiing and glissading.

If you can capture the atmosphere of a camping trip, you'll also capture a great part of the experience of outdoor living. From the first flush in the east to the final purple glow, dawn and dusk are magnificent times in the backcountry. Don't stop at nightfall, though. Firelight, even candlelight, is enough for evocative shots that show the magic of camp evenings. Be very careful with fire, of course, and don't build one in alpine or dry regions where flames may be dangerous or prohibited. The moon, too, is often especially beautiful in wilderness scenes. Experiment with different exposures for late dusk and fireside shooting. I've found that for Kodak Kodachrome 64 Film, five seconds at  $f/8$  is a good starting place.

You may not be doing any hiking or exploring in fog or storms, but don't put your camera away. Take precautions against the moisture and



Taken with a 50mm lens, this shot owes its effectiveness to composition of subject and majestic background, all kept in focus by using small aperture setting.

ALL PHOTOS BY THE AUTHOR.

get out there! Moody, impressionistic scenes are often even more beautiful when viewed through close-up and wide-angle lenses. Be extra ready for the opening overtures of storms and periods of clearing. The vapors pour through rocky passes, and sunlight glimmers briefly on dew-spangled flowers. Snow, too, can create magical scenes. Photographing in all these conditions can add a new dimension to your answer when someone asks, "How was the weather?" When you crawl back into the tent, check out your companions' expressions and activities. There may be some interesting portraits of those waiting out the storm.

Most atmosphere shots require a tripod. There are many brands of packable ones available and also small camera mounts that clamp onto branches or ice axes. You may soon discover that it's usually worth the weight to carry a strong support. Wind and unsure footing can sway a lightweight tripod. But you may not have a sturdy support when you need one. In a pinch I have used flat rocks, tree crotches and even occasionally anchored the strap and camera over a branch and hoped the wind didn't blow. Don't forget to bring a cable release; in fact, it may be wise to take a spare.

Hikers who go out alone have no problems with irritable companions or always being the last one into camp. But they lack human subjects. Even if you have a friend along, the shots you

take are never of you. A tripod can help if your camera has a self-timer. Again, realistic placement and action of the subject—you—can make the shots come to life. With enough backtracking experience, the lone hiker can record his entire trek with the skill of a pro. Be sure to double-check everything before releasing the shutter. I've taken quite a few dud shots of beautiful scenes obscured by a huge out-of-focus hand because I forgot to set the timer. Long bulb releases or remote shutter controls are answers to that problem.

Another problem in backcountry photography is much more serious, and that's the growing number of people who explore the wilderness, leaving trails of litter and trampled meadows in their wake. Photographers, with our extra trash and penchant for leaving the trail to get a good angle, bear an extra responsibility to protect America's trail country. Dispose of your garbage carefully and be careful of fragile plants and fresh water. If all of us are careful to leave nature as we found it, the scenery will remain for many future generations of imaginative backpacking photographers. □





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# A CASE FOR CARRYING ON

A NEW LOOK  
AT AN OLD COMPANION  
BY DAVID BROOKS



Adapta-A-Case, Model P-70M



The Adapt-A-Case Model P-70 is available in two sizes and three colors, charcoal gray, olive brown and black, priced at \$77 and \$89.

**W**ith system cameras proliferating and accessories of every description becoming thought of as "essentials," the need for larger camera cases increases. This need is in part being met by a number of manufacturers who are providing the photographer with a greater range of choices than ever before. To make a selection from what is offered we need to consider what functions a camera case should serve and what specific needs it should meet. We might even question the entire concept of a camera case and get really fundamental.

Have you ever asked yourself whether you really *need* a camera case or rather just feel it's something you *should* have? To help answer that question let's take a closer look at your enthusiasm for photography. No doubt your interest leads to productivity, and the production of pictures provides experience. Experience adds to your abilities and creates a need for greater and more diverse challenges. This is where the rub comes. The challenge to do new or better things often involves the need for filters, telephoto lens, handheld meter or bellows.

So if you are like many of us who get satisfaction out of new photographic challenges, you probably have ac-

quired some of the paraphernalia photographers tend to accumulate. And if you are also like most, acquiring equipment doesn't follow any kind of predetermined "five-year plan." Budgets, of course, put many of the gadgets on a list of priorities, but a truly functional hierarchy of needs is next to impossible, usually only applying to a few, rare, single-minded and deliberate individuals.

For most of us the function of organization only becomes apparent when we become totally frustrated by rummaging around the bottom of a too-small gadget bag for an elusive filter that we're certain was used on last year's trip to the mountains. If pleasure in photography is paramount, then the avoidance of such frustration should also be of primary importance. To use a camera, several lenses, filters, lens shades, meters and what-have-you effectively, they must be accessible, each in its own logical place that's easily remembered and convenient. A camera case is a necessity, if for no other reason than to provide a means of organizing photographic equipment in a manner that makes picture taking more efficient, less frustrating and, above all more pleasurable.

Camera cases, though, are not made

and sold primarily to serve as means of organizing a collection of photo equipment in a logical, functional manner. Their primary purpose is to contain equipment in such a manner that it may be conveniently transported from place to place. This may entail their being hand carried, thrown in the trunk of an automobile, backpacked or checked into the luggage compartment of a plane, bus or passenger train.

The most immediate concern of transportability would be *weight* if the case is going to be carried personally. The *shape*, if it's going to be packed on a hiking trip, is also a consideration affecting personal comfort. Or if it will be subjected to the endless abuses of checked luggage, the *strength* of the case and its ability to protect the contents must be priorities. With more of us driving smaller cars the overall *compactness* for ease of packing must also be a factor.

Regardless of how a camera case is going to be used, its function in respect to *security* from theft is of utmost importance. Today's crime rate, combined with a greater public awareness of photography and the value of camera equipment, should lead to careful deliberation on the characteristics that affect a case's security. Are the locks





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**HMC Photo Equipment Cases come in three sizes ranging in price from \$57.95 to \$189.95.**

strong and secure, and will they be difficult or easy to "pick?" Even more important, if your case is checked in as travel luggage, will it be readily recognized as a camera case, or will it look like a nondescript, ordinary piece of luggage blending in with the rest?

Now let's assume that both camera case and you have reached the destination, and you are ready to take pictures. Is your case ready? Once you are there, a major and crucial functional value of the case is whether it can be worked out of easily. Can all the contents be reached without disturbing other items? Can you place the case down safely if need be? Once it is set down, can it be moved without having to lock it up entirely without spilling its contents? If there is no place to put the case, is it possible to open it safely while it's slung over your shoulder?

In addition to the purely practical there are considerations involving personal taste. Color, styling and finish all enter into making an individual choice. To make at least the practical qualities somewhat simpler to deal with, a list of factors follows with specific points for you to consider.

#### 1. EQUIPMENT ORGANIZATION

- Provision for separating individual pieces of equipment

- Facility to interchange equipment carried

- Immediate access to each item
- Replaceability of partitioning

#### 2. WEIGHT AND SIZE

- Efficient use of space—little difference between total bulk and carrying capacity

- Light weight for carrying
- A shape that packs easily with other luggage and is not awkward to carry

#### 3. EQUIPMENT PROTECTION

- Exterior is rigid and will resist deforming from blows

- Interior separation will hold equipment securely and prevent contact between items

- Lining absorbs sharp shocks and excessive vibration

- Offers protection from elements

#### 4. FINISH AND FITTINGS

- Handle, straps, hinges and locks are solid, work easily and will stand wear from frequent use

- Finish is durable, scuff resistant and will not transmit heat to interior

- Access is quick and simple

- Latches and fastenings provide insurance from accidental opening

#### 5. SECURITY

- Locks are strong and difficult to pick or jimmy

- Appearance will not attract thieves

- Provision for personal identification card or tag

#### 6. USE

- Can be placed on ground to work out of without damage to case or danger to equipment

- Access can be locked open

- Can be moved without danger of spilling contents

- Access to contents possible while case is slung over shoulder

#### 7. COMFORT

- Handle or carrying strap will not cause fatigue

- Locks and fastenings have large, smooth gripping surface

- Is free of sharp corners and edges that might irritate carrier

It would be impossible to establish that any one case design is superior to any other. A good choice in a camera case is so much a matter of personal need. For this reason, to incorporate every "ideal" feature in one case would be next to impossible. Such an "ideal" case would likely cost more than could be normally afforded! But more important, if the list of considerations is put in every possible order of relative priorities according to individual needs, some cases will be chosen in respect to frequent travel usage. Some



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## CARRYING ON

will be chosen more for storage and inside use. Others will be best because ease of carrying is the first necessity. Whatever is primary on your need scale, there is a case that will work best for you.

The choices of different camera case designs have become much more varied than they were even a year or two ago. A selection of some of the newer designs, and new variations of established designs, is included, but it is far from a complete survey of what is available. The variety of cases illustrated and described is intended only to give you some indication of what is available and how your particular needs might be filled. A final decision as to what specific case is best for you should be made on the basis of a personal inspection of several samples after careful consideration of all the factors that are important to you.

### READY-MADE CASES

#### Adapt-A-Case, Model P-70M

Adapt-A-Case is manufactured by Fiberbilt Photo Products, 601 West 20th Street, New York, New York 10001. The size is 18x14x6 inches. It is constructed of ABS plastic in ribbed design for maximum strength. It is an attaché style with hinged lid that may be locked in an open position. There is an extruded aluminum molding around the case opening that interlocks with a similar surround on the lid, and there are two double-acting tension fasteners with integral key locks. A molded plastic handle is provided. The case is lined with firm-grade plastic foam that is grooved on the sides to accept the foam-covered partitions. Partitions may be arranged to suit the needs of the user. Extra partitions are available as is an accessory shoulder strap. The case is ruggedly finished for heavy use. Weight is moderate. Appearance is between normal luggage and the look of a military instrument case. It's available in charcoal gray, brown and black.

#### Adapt-A-Case, Model P-100XL

Also manufactured by Fiberbilt Photo Products, this case measures 18x13x6 inches. It is constructed of a plastic material that has an authentic-looking, wood-grain surface with black molding at the ends of the case. It is an attaché-case style with a hinged lid. The moldings around the lid and case opening are interlocking. Two fasteners with integral key locks are employed. A molded plastic handle is provided. Case is lined with firm-grade plastic



Rangefinder Leather Case



Custom-made camera cases vary in price according to the materials used and the complexity and size of the case. The sample illustrated would cost from \$200 to \$300 at most custom-leather shops.

foam slotted on the sides to accept foam-covered partitions. The various sized partitions can be arranged to suit individual needs. Extra partitions and an accessory shoulder strap are available. This is a lightweight case for its carrying capacity and strength. It's very similar to luggage in appearance and would probably be mistaken for a large attaché case.

#### Zero-Halliburton, Model 121-205

Zero-Halliburton cases are distributed by Berkey Marketing Companies, Inc., 25-20 Brooklyn-Queens Expressway West, Woodside, New York 11377. The size is 21x13x6 1/2 inches. The case is constructed of prestressed, heat-treated aluminum. Case opening is of interlocking, extruded aluminum with a neoprene seal to keep out dust and moisture. It is a luggage-style case with hinged lid. Two double-acting fasteners are employed with a single, separate, tumbler-type, three-digit combination lock. The case is filled with medium-firmness foam. Cutouts for each piece of equipment must be made by the user, and replacement foam cores are available. This is a very lightweight case of great strength and durability. The black finish is very attractive but somewhat subject to surface scuffing. It has the appearance of expensive luggage; in fact, Zero-Halliburton luggage can also be purchased to match camera case.





#### HMC 240 Photo Equipment Case

The HMC 240 case is manufactured by Hoos Manufacturing Company, 1035 Wesley Avenue, Evanston, Illinois 60202. Its size is 19x13½x9½ inches. This unique, new case design is constructed of injection-molded plastic with a black pebble finish and wood-grain trim inserts. It has the configuration of a quality tool chest with a sliding panel front cover and three removable drawers, one 1½ inches, one 3½ inches and the other five inches deep; extra drawers are available. The drawers are lined with a heavy, velvetlike material, and adjustable dividers are provided with Velcro-type fasteners. Extra dividers are also available. The front panel is held closed by a single fastener that incorporates a hasp for an owner-supplied padlock. The design provides maximum carrying space for its overall size with good accessibility. The appearance of the case might cause one to mistake it for a super-deluxe tackle box.

#### Ultima, Model RSL 50

The Ultima Super Deluxe RSL case is manufactured by Marsand Industries, Inc., 5150 W. Jefferson Blvd., Los Angeles, California 90016. Its size is 16x12x4½ inches. It is constructed of leatherlike Ranchyde. Designed like an attaché case, it has a heavy-duty, two-way zipper to close lid. A large flap attached to the lid covers the zipper pulls and snaps into a single luggage-type fastener with a key lock. A double strap with a Ranchyde surround makes up the carrying handle, with provision for shoulder strap. The case is foam

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## CARRYING ON

filled with a velvet cover laminated to the foam core. The foam core is pre-cut in quadrants to facilitate making cut-outs to fit the equipment that will be carried. The foam is soft and pliant. The appearance of the case is such that it would be mistaken for normal luggage. It is quite lightweight and compact.

### CUSTOM-MADE CASES

#### Rangefinder Leather Case

This case was designed and made to my specifications by Rangefinder Leather, 644 Cypress Avenue, Hermosa Beach, California 90254. The size is 19½x9½x8 inches. It is constructed of heavy-grade, top-grain cowhide and is designed to carry two motor-driven 35mm single-lens reflex cameras, six lenses, filters and a hand-held light meter. The shape and openings are intended to allow the case to be easily shoulder carried with complete access to all contents while being carried. Provision is made for locking the case securely so it could be checked as luggage; there are fittings for three padlocks. The shoulder strap doubles across the top of the case through loops on the lids of the case. The covers of each of the two compartments are zippered separately and can be separately padlocked. Linings and partitions are made of thick-grade sheepskin fleece, as are the pads on the exterior surfaces. A fleece-lined shoulder pad incorporates a window for an identification card. Because of its all-natural leather construction, the case is quite heavy, but considering its carrying capacity, the weight is not excessive. Its appearance cannot be described as anything but unique.

As a source for camera cases, custom leather shops have become readily available in greater and greater numbers during the last few years. A sophisticated, complex design can be quite expensive. Well-made cases, however, of a good grade of leather are extremely durable and justify the investment. In addition, you'll get a case that exactly meets your individual needs and tastes.

#### Custom Case Makers of America (not shown)

Roy's Case Manufacturing Company, 147 Zeon Street, Hartford, Connecticut 06106, provided a very small case to illustrate their construction and to bring to the reader's awareness the fact that CCA's members all over the country have been making custom cases for all



Ultima, Model RSL 50



ALL PHOTOS BY THE AUTHOR.  
Ultima cases come in three colors including black, brown and tan. Two sizes are available at \$59.95 and \$79.95.

kinds of applications—including camera equipment—for years. These cases are usually made of high-grade plywood covered with leather or a leatherlike material. They are usually of the attaché type with hinged lid, handle and latches with built-in key locks. The corners are often reinforced with metal, adding strength and reducing scuffing and wear. The case can be either foam filled with cutouts or partitioned to your specifications. They are made to order to exact measurements. You may contact Roy's or look up a local CCA member and get an estimate on what would satisfy your needs.

Whether your preference is for one of the ready-made cases or for a case made to your own specifications, careful consideration of all the practical factors and your own situation may save you from a soon-to-be regretted purchase, make a hike easier and more fun or prevent theft. But most of all, a functional case, suited to your needs, will insure more rewarding and pleasant picture-taking experiences. □



# BLUEPRINT SERIES

## How To Construct a Photo Display Panel



Homosote panels used in photo club gallery display.

BY WALT SENG

**PROJECT:** To construct a display panel for photographic prints.

**PURPOSE:** To provide a simple yet versatile system for displaying photographs in your home, office or photo club gallery.

**EQUIPMENT:** 1. Panel or panels of homosote (available in 4x8-foot sheets); 2. Single-weight window or nonglare glass pre-cut to fit photos; 3. One-inch screw hooks (three for each photo to be hung); 4. Straight pins; 5. Matte-finish paint (black is good) or fabric such as linen or burlap for covering the homosote panel; 6. Sharp utility knife for cutting panel; 7. Straightedge; 8. Paintbrush and roller (if you paint panel); or 9. Staple gun to affix fabric to panel; 10. Toggle bolts, contact cement or a material of your choice for fastening panel to wall or partition; 11. Screwdriver.

**ASSEMBLY GUIDE:** I am not going to detail a particular method of affixing the homosote panel to your wall, since there are several ways to do it. Toggle bolts can be used on plasterboard walls where

you might wish to remove the panel at a later date with little damage to the wall. Contact cement should be used only when the display is to be permanent. I might suggest you use your ingenuity to design a freestanding display made with 2x2s.

You might consider standardizing the size of the glass under which the photos are secured. For instance, if the largest photos to be displayed will be 16x20 inches, a number of pieces of glass of that size can be used to secure photos of any size up to 16x20 inches. Smaller size photos are held in position with straight pins, after which the glass is put in place. You might consider this approach if the photos will be changed from time to time, and if they will vary in size.

Window glass ordered from the hardware store usually has rather sharp edges. You can sand the edges with emery cloth to prevent injury. Needless to say, it is wise to wear gloves while doing this.

**CONSTRUCTION:** Cut the homosote to size, using a very sharp blade and straightedge to make the cuts. Prepare the

surface of the homosote by painting it or covering it with fabric. If you elect to paint, it's necessary to paint both sides of the panel to prevent warping. (You need do this the first time only.) Fabric is attached by wrapping it around the panel and stapling (see photo No. 1).

The panel is ready to be affixed to a wall or freestanding structure. If you are using toggle bolts to hang the panel, paint them to match the color of the painted panel or fabric covering (see photos No. 2 and 3).

Next measure the panel for placement of the hooks to hold the glass in place. For your display you can try even spacing for a formal presentation or random placement for a casual look.

After determining the position of the glass, mark the placement of the one-inch screw hooks (see photo No. 4). Three hooks are used to keep the glass in place. One hook is fastened at the top edge of the glass, and two are placed at the bottom edge. The top hook is centered on the glass, and the two hooks at the bottom are spaced





1. Use a staple gun to attach linen fabric to homosote panel.



2. Affix panel to plasterboard wall with toggle bolts.



3. Paint bolt heads to match fabric cover of panel.



4. Measure position of one-inch screw hooks which hold glass and photo in place.



5. Secure screw hook into panel.



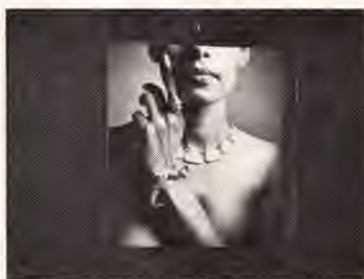
6. Place photo and glass in position behind hooks.



7. Use pins to hold photo in place when photo is smaller than glass cover.



8. Detail showing pinhead securing photo prior to glass installation.



9. Photo in place under glass supported by two straight pins.

roughly two inches in from the vertical sides of the glass. It is not necessary to use more than three screw hooks. Screw in the hooks, leaving approximately a 1/4-inch space between the hook and the surface of the panel (see photo No. 5).

If the dimensions of the photo are the same as the glass, simply place the photo behind the glass, then secure them both behind the screw hooks (see photo No. 6). Tighten the hooks to insure a firm fit. Care must be taken to keep the glass from chipping slightly where it comes into contact with the hooks.

Photos which are smaller than the glass are held in position by using two straight pins pushed into the panel in line with the bottom edge of

the photo. Do not push the pins through the print. The bottom edge of the print merely rests on the pins, and the heads of the pins secure the photo (see photos No. 7 and 8). The pins are virtually invisible after the glass has been installed (see photo No. 9). Mounted and unmounted photos can be hung in this manner. An unmounted photo will be flattened by the pressure of the glass against it.

**GENERAL DISCUSSION:** This system for displaying photographs is unique in its flexibility, durability and economy. It also provides a "frameless" method for hanging photos. (A substantial exhibition can cost around \$500 just for framing.) The homosote can be mounted in many different

ways; the photos can be arranged differently for each new display. The "self-healing" property of the surface affords many years of use. For gallery use the panels can be painted for each new show. Different colors can be chosen to complement the photographs' mood and subject matter.

This system eliminates unsightly wires and hooks. And in addition to not requiring frames, the photos need not even be mounted. (All photos used in this article were unmounted, double-weight prints.)

The glass offers protection against fingerprints and dust. For long-standing displays, clean the glass occasionally to maintain a fresh appearance. © Walt Seng □



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# GALLERY '76

1. Kevin Block photographed this candid, silhouetted duo with a Rolleiflex 2 1/4 x 2 1/4 camera and 75mm Xenar lens. Kodak Plus-X Pan Film was exposed for 1/125 at f/11. Silhouette is result of strong backlighting and printing negative on Agfa No. 6 paper.

2. Photograph of musician owes its interest to unusual treatment of subject by photographers Gregory Koss and Paul Bonino. Photo taken with Nikon F camera, 85-210mm Nikkor zoom lens and Kodak Tri-X Film rated at E.I. 1200 and exposed for 1/30 at f/5.6. Negative was developed in Acufine, then a direct copy was made onto Kodak Kodalith Ortho Film, which was solarized to complete the effect.

3. Close-up of delicate sunflowers was taken by Denner Ross, who used a Pentax Spotmatic, 50mm SMCT lens and Kodak High-Speed Infrared Film exposed through a red 25A filter to make the photograph. Exposure unrecorded; print made on Agfa Brovira No. 4 paper.

4. Jimmy Rea created a stroboscopic effect to capture this dancer's graceful movements with a Minolta SR-T101 camera, 55mm Rokkor lens and Kodak Panatomic-X Film. Lighting was with an Ascorlight QC-8 set at 200 W/S, and camera aperture was set for f/5.6 with the shutter held open. To make photo film was first advanced through the camera with lens cap on. Shutter was held open with cable release, and the rewind button was engaged. Then film was re-wound back into the cartridge at a constant rate, and throughout the rewinding an assistant repeatedly tripped the flash at a steady rate.

5. This serene scene was photographed by Thomas F. Pula with a Minolta camera and 55mm Rokkor lens just as the sailboat passed in front of the tree, to be perfectly framed. High-Speed Infrared film was exposed for 1/30 at f/11.







4



5

□ The photographs on these pages were taken by photographers of professional caliber. In order to provide these talented individuals with a forum for displaying their best efforts, we present this month's Gallery '76. If you feel your photographs are of similar caliber, send us the evidence (along with a stamped, self-addressed return mailer—in case we don't agree). *Beginning with the August, 1976 issue, PhotoGraphic will consider either black-and-white or color photographs submitted according to the following guidelines:*

**Black-and-white**—There is no limit to the size or number of prints you may submit to Gallery '76. Your name and address and all pertinent data—camera make, lens, film, exposure, special printing techniques, etc.—must be printed *on the back* of each picture.

**Color**—We will accept no more than five color transparencies from any photographer for consideration. To submit color transparencies, print your name and an identification number on each photo and enclose all equipment and exposure information on a separate piece of paper, with your name and address at top and captions numbered to correspond with transparency identification numbers. Color prints must be at least 3½x4¼ inches in size on glossy paper, with your name and address and all pertinent data printed on the back of each photograph.

Also, for any photograph in which a person or persons can be identified, the picture must be accompanied by a signed release from each recognizable individual. PhotoGraphic will pay \$25 for each picture published. Prints and transparencies are accepted for one-time use and will be returned after publication date. □



# Typewriter Texxture Screens

## Pick A Key Any Key

By Steven Rosenbaum

If the pen is mightier than the sword, just imagine how powerful the typewriter can be! Armed with little more than a fresh ribbon, some patience and your trusty keyboard, you'll soon be generating some very graphic and powerful images. These images are partly *graphic* and partly *photographic*; they involve a few techniques that are not difficult to understand but which do require a little bit of preplanning to be most effective.

### THE SCREEN

In its simplest form, producing Typewriter Texxture Screens consists of first producing typewritten copy on smooth white paper. The typing can be totally random, with the characters making no sense, or it can be a carefully thought-out and well-spaced message. The accompanying illustrations show examples of both kinds of screens. The sheet of typewritten material is then photographed on Kodak High Contrast Copy Film 5069, which is readily available in 35mm 36-exposure rolls (Kodak catalog No. 171 0060). Once processed, the high contrast negative that results will record the typed characters as clear areas (transparent) surrounded by a very dense background area. Although the typed material can be photographed using a tripod-mounted camera and any suitable light source, I have found it more convenient to use a copy stand with a 35mm single-lens reflex camera equipped with a macro lens to allow for close focusing; illumination is provided by tungsten copy stand lights.

### EXPOSURE

By following a simple procedure,



1. A copystand like the Technal TC-1 unit, shown here, provides even illumination and a rigid support for your camera. For best results use a sheet of glass to keep the artwork flat while copying.

2. This universal photo-postcard greeting contains well over 50 different, repeating messages. The typed original can repeat the same message over and over, or it can contain random characters making no verbal sense at all.

3. The Typewriter Texxture Screen concept begins to sparkle when combined with other artwork. This hand-drawn pen-and-ink profile (drawn by author) has been matched with a Typewriter Texxture Screen, as described in the text.

4. A representative selection of clip-art illustrations that are available for use copyright-free is shown here. In addition to sources mentioned in article, you might also search out 19th-century magazines in flea markets, etc. Such publications generally contain unusual advertising illustrations that are now in the public domain.

your built-in camera exposure meter, which normally gauges the correct exposure by reading a gray card or average scene, can be used to provide the right exposure by reading the white typing paper or a matte-white card. Kodak High Contrast Copy film has an ASA rating of 64; however, by setting the exposure meter dial as though the film had an ASA rating of 12, you will produce the correct amount of controlled overexposure necessary to read the white card directly. High contrast film has less exposure latitude than does a more conventional, continuous-tone film like Kodak Tri-X. Too much exposure will cause the typed characters to be recorded with some film density where there should be none. This will result in a loss of some fine detail. Too little exposure will produce a negative with insufficient background density for use with this technique and may require a high contrast paper when printing to compensate for the underexposure in the negative. You may, therefore, want to bracket the exposures on your first roll of film to determine the best exposure settings to use for your own copying/processing setup.

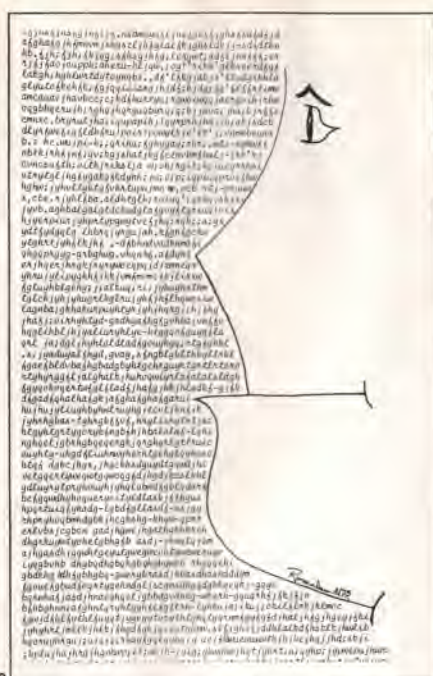
### PROCESSING

Since High Contrast Copy film is panchromatic, it must be loaded onto

istmas...come to a luncheon...  
ival...happy halloween...open  
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nks for everything...happy ea  
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soon...best wishes for the n  
py anniversary...congratulation  
you every day...thanks for ev  
e...happy ground hog day...co  
py mother's day...belated bir  
s...happy easter...congratula  
e a nice trip...we'll miss y  
e...happy valentine's day...I  
n house at our house...happy  
your retirement...happy new y  
ything...happy new year...ha  
d turn deserves another...com  
thday uncle...happy sweet six  
come to the neighborhood...ha  
...best wishes for a speedy r  
n...our thoughts are with you  
ghbor...congratulations big-s  
e summer...I think of you oft  
gratulations on the new car..  
must be love...happy father's  
my love...we've moved...cong  
ner...hope to see you again..  
you...I'm sorry...one good tu  
s around?...thanks for thinki  
e you...come back soon...merr  
iversary...congratulations on  
e...happy sweet sixteen...tha  
e to the office party...you m  
etings...congratulations on t  
over...happy birthday grandma  
ly neighbor...belated birthda  
r...you're invited for dinner  
...wanna mess around?...happy  
py birthday son...happy thank  
well soon...thanks for think  
gratulations on your promotio  
e thinking of you...bon voya  
...happy ground hog day...we  
e here...let's talk it over..  
re a one-of-a-kind...congrat  
must have been a beautiful b  
e to you...open house at our  
car...I miss you...happy mot  
d...we're sorry...better lat  
istmas... come to a baby show  
er...congratulations on your  
dparents...wanna see mi etch



na be near you...congratulations  
at our house... I think of  
thanksgiving...just heard the  
congratulations on your prom  
ent...come to a baby shower...  
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fourth of july...we've moved  
n your graduation...happy new  
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wdy neighbor...come to a picnic...get well soon...happy birthday...your promotion...wanna mess  
ng...I've moved...merry christmas...on your new baby...happy father's day...please write to me...of you all the time...please write to me...just heard the good news...congratulations on the new job...ever anniversary...thanks for cocktails...wanna see my etchings...come to a luncheon...I wanna see you...worth of july...congratulations...y...thanks for a nice time...happy halloween...happy birthday...school's out...happy mother's day...merry christmas...belated birthday...miss you...congratulations on your birthday...happy birthday niece...long time no see...congratulations on your engagement...you have a speedy recovery...wishes another...wish you were here...congratulations on your retirement...happy birthday nephew...retirement...we're gonna miss you...being you...I think of you so much to me...happy fourth of july...baby...we're very happy for you...congratulations on the new job...congratulations on your wedding...ear...we've moved... I'll never see you...long time no see...happy birthday...us...come for cocktails...have me back soon...belated birthday...happy birthday dad...I'm sorry I didn't write to the neighborhood...we love you very happy for you...thanks for the cards on your retirement...happy birthday...have a nice vacation... every year...come to a party...congratulations...day...I think of you all the time...never...you mean so much to me...just heard the good news...please write to me...thanks for everything...happy birthday dear...I can



your developing reels in total darkness, like normal film. Unlike orthochromatic high contrast film (Kodalith Ortho) that you may have worked with, there is no safelight that can be routinely employed with this material. Kodak recommends processing High Contrast Copy film in Kodak D-19 developer (straight); recommended processing time is six minutes at 68°F. By experimentation, however, I have found that an 8½-minute development time will produce a negative with a high enough background density for my purposes. The rest of the processing procedure (fixing, washing, drying) is identical to more conventional films.

#### APPLICATIONS

The negatives can be placed in the enlarger and printed just as they are. I will deal with some of the more inspiring possibilities for combining the Typewriter Textxture Screens with other images in a little while. But first, there is something very eye-catching about the appearance of even ordinary typewriter characters when they are reduced in size. The reduced typeface almost has a typeset appearance to it, which makes it look more elegant. Making photo-postcards, therefore, is an excellent use of this process. The slight enlargement of a postcard-size image makes the message quite readable, while at the same time it provides the charm of a miniature document.

I have produced one Typewriter Textxture Screen, for instance, that contains a repeating series of more than 50 popular greetings from "happy birthday" to "thanks for being you." The recurring messages fill the entire



postcard-size image; by printing a batch of these cards ahead of time, I am able to file them away and send them as I need to. When using the cards, I simply circle the appropriate greeting or use transparent felt-tip markers in various colors to highlight the suitable message. The address side of the postcard is used to add a few personal words as well. For variety use some uppercase letters and some lowercase letters; if you have access to a typewriter with interchangeable typefaces, you can add another interesting dimension by changing from one face to another.

#### CLIP-ART

As you may have already noticed from the accompanying illustrations, the Typewriter Textxture Screen technique has most impact when the screen is combined with other images; the combined images can be either line-art (drawings) or continuous-tone (photographs) or a combination of both. Photo No. 3 shows a drawing I made of a profile that has been combined with a randomly typed Textxture Screen to illustrate this point. To accomplish this technique simply place the drawing over the typewritten copy so that the high contrast negative you make is a product of photographing the overlapped images. For best results use a clean sheet of glass over the combination to hold it flat during copying. What if you can't draw? That's no problem—everyone can doodle, and doodling is fair game for this technique. Besides, how about combining the typewritten material with a personalized family portrait drawn by your



# Texxture

first-grader? The drawings do not have to look professional for this technique to have impact.

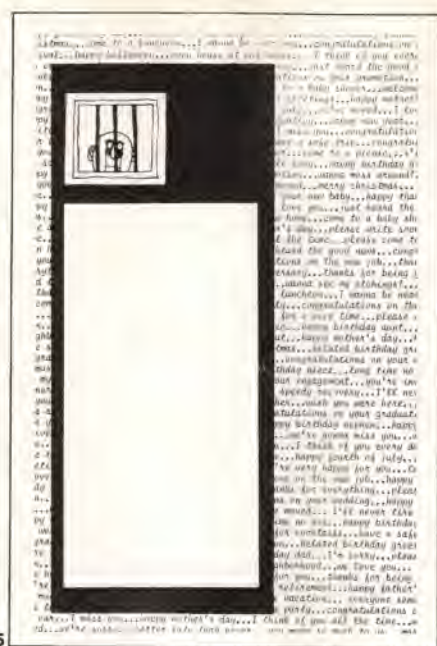
If you do want very polished-looking illustrations, you ought to be aware of "clip-art." There are volumes of artist-drawn illustrations and old advertising woodcuts that are available for such use. When you purchase a clip-art book, you also purchase the rights to reproduce the material contained in the book. These books contain illustrations for just about any situation or idea you may have. A check through your local art supply store should turn up a pretty good selection of clip-art books from which to choose. Two such books are: *The Cartoon Clip Book*, Dick Sutphen Studios, Inc., Box 628, Scottsdale, Arizona 85252, and *The Handbook of Early Advertising Art* by Clarence P. Horning, Dover Publications, Inc., 180 Varick Street, New York, New York 10014. You might also want to check with your local library for additional source material. Photo No. 4 shows a representative selection of copyright-free clip-art material that is available.

In use the clip-art drawings are cut out of the book, placed over the Texxture Screen and copied in combination, as described earlier. Of course, knowing what you now know about high contrast copying, you can start a file of these clip-art illustrations by photographing them ahead of time and then rephotographing the prints made from these negatives instead of actually cutting up your books.

## VARIATIONS

Combining an actual photograph with a Typewriter Texxture Screen and/or clip-art image will require a slightly different procedure than those previously discussed, since the High Contrast Copy film is not designed to reproduce a continuous-tone photograph well. Photos No. 5 and 6 illustrate a way I have devised to get around the problem of combining line-art with a continuous-tone photograph.

On top of the Typewriter Texxture Screen I have placed a piece of black construction paper. On the black paper is a clip-art illustration (of the prisoner) which I trimmed to allow for an even white border. Also on top of the black paper is a piece of blank white paper. When this combination is photographed under glass, as described earlier, the negative which results will produce a print that looks like Photo No. 5. The blank white space can be used to write



5.&6. These illustrations, which I have titled "Prisoner of Love," combine Typewriter Texxture Screen with clip-art and an actual photograph. See text for details.

7. This illustration, quite appropriate for the upcoming Fourth of July celebration, gives the illusion of a white-bordered print which has been placed on a black submount. The method of careful registration necessary to produce such an image is outlined in text.

8. Using the techniques described, a supply of photo-postcards can be made ahead of time and filed away. When needed, simply select the appropriate greeting, add a few personal words on the opposite side and mail.

9. Clip-art and Typewriter Texxture Screens combine to produce ideal color-it-yourself party favors for youngsters. This crayon or marking-pen coloring technique also makes an excellent rainy-day project.

10. Use of alternate typefaces adds another dimension of interest, as shown. If you don't have access to a typewriter with interchangeable type styles, you might try some variations of upper- and lowercase characters or patterns made from common symbols (like \$\$\$, ###, \*\*, etc.).

or draw a more personalized message. Or by double-exposing this high contrast negative with a continuous-tone negative in registration when printing, a combined print like Photo No. 6 is formed. For more specific information about how to make a pencil tracing to help you properly position the second negative, see "Point Source," February, 1976 issue.

Registration, of course, is not critical in this application, since the surrounding black area provides an "overflow" of black which will help hide any small errors. Confused? It's really not hard—think about it. When making the first exposure of the High Contrast Copy film negative, the blank white area of the print has received no exposure (that's why it's white), and the surrounding black area has received maximum exposure (that's why it's black). When the second exposure is made from the continuous-tone negative, it records an image in the previously



ALL PHOTOS BY THE AUTHOR.

unexposed blank white area. If any image spills over into the surrounding black area it will not show, since that area has already received enough exposure to make it black and hide your small mistakes.

Photo No. 7 combines all these techniques in one image, and it utilizes a slightly more critical method of registering the continuous-tone photograph. The flag-waving, clip-art character was placed directly on top of the Typewriter Texxture Screen, and the black-and-white pieces of paper were placed alongside the clip-art, as mentioned earlier. This time, however, when the continuous-tone negative was double-printed, the image was made smaller so that it did not extend to the edges of the unexposed white area. An adjustable easel was used to carefully





8



9

mask off the image, as indicated by the pencil tracing. The resulting image appears to be a photograph with a conventional white border that has been placed on a black submount.

### WRAP-UP

Not that the giant greeting card companies will start trembling at the ideas presented here, but these techniques are ideally suited for making your own photographic postcards. Kodak supplies postcard-size paper with the appropriate address imprint on one side; this material is available from your local dealer. Another source for both the postcard paper and the appropriate postcard easels is Spiratone, Inc., 135-06 Northern Boulevard, Flushing, New York 11354.

You can make your own postcards without an address imprint by using



10

double-weight paper and cutting it to the appropriate size. If you intend to write on or hand color the image side, a nonglossy paper surface is preferable, since it will be more accepting of such surface treatments.

While on the subject of hand coloring, Photo No. 9 shows an ideal children's birthday party favor. The simple line illustration, with the appropriate "happy birthday" Typewriter Textxture Screen background, provides a color-it-yourself party game to be used with crayons or marking pens. A simple prize can be offered for the best coloring job, and of course, each child gets to take home his/her own hand-colored memory of a happy birthday party. Finally, Photo No. 10 shows the effect of different typefaces, while at the same time provides an excellent background for a Thanksgiving dinner seating placard. Simply fill in the name of each person on the white area along the bottom of the card and leave one in front of each place setting on the table.

Henry David Thoreau once said, "I have received no more than one or two letters in my life that were worth the postage." No doubt he hadn't received one of mine!

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For the working photojournalist the significance of his images should depend, not on how finely crafted they are, but on why the pictures were taken in the first place. The concerns of a good photojournalist mirror the concerns of society, and of necessity, those concerns are fundamentally human concerns.

Even though modern communications media provide more information about the lives of our fellow creatures than ever before, there is still a profound need for even greater understanding. As the world grows smaller, more compassion for the human condition becomes essential if we expect to live together in one world.

Ian Dryden's sensitive insights presented here help us to relate to the people living in a barren and hostile environment. The hardships and deprivation evident in his scenes of Northern Ireland and Scotland emphasize how much everyone should be concerned with the human condition.

Ian accomplishes his work with modest means, relying on two Pentax S1A cameras and a Weston Master V light meter. He uses Kodak Tri-X

Film, developed in Microdol-X, almost exclusively. A 28mm lens is his standard, allowing him to work close to his subject and to establish psychological contact. He composes in the camera, keeping his technique straightforward and simple so he can concentrate on picture content.

If there is any secret to Ian Dryden's ability to communicate with his pictures, it is inseparable from his motivation. He quotes Steiglitz to describe what he is trying to achieve with his photography. "To explain man to man, and man to himself." □

# IAN

# DRYDEN:

# MAN TO





# MANKIND









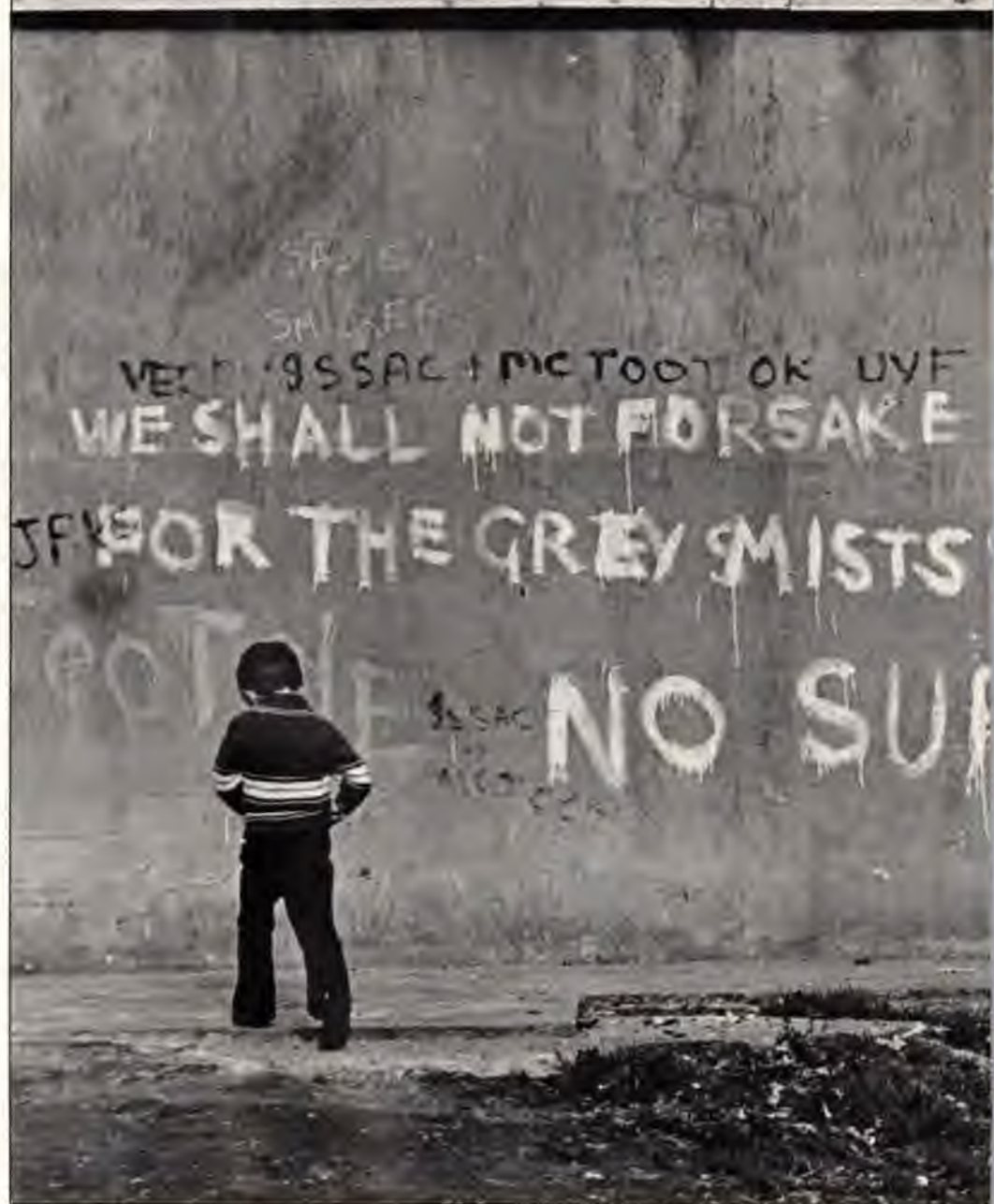
# IAN DRYDEN





# IAN DRYDEN

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H WARNING

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# IAN DRYDEN









# IAN DRYDEN





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# HOW TO MAKE OLD-TIME LANTERN SHOWS

## RECREATE A BYGONE ERA

BY LARRY DONELSON

**W**ith the nation's Bicentennial already in full swing it seems photo studios featuring old-time portraits are becoming more and more popular. So now's a perfect opportunity to use this old-time theme to create a unique slide show, and all you'll need are a Kodak Direct Positive Developing Outfit, brown toner and a few other easily obtainable items. With this material and some spare time you will be able to present a slide show with contemporary transparencies that look like the photographic prints taken in the late 1800s.

Choice of subject matter is important. You must avoid anything that is post-1920 technology in order to obtain the desired mood. However, your possibilities are still great. You have a choice of landscapes, animals, old buildings, cowboys, ghost towns, Indian villages and numerous state and national historic monuments. During the nation's Bicentennial, there will be countless exhibits, demonstrations, parades, reenactments of battles and journeys and restorations of historic buildings. The possibilities are limited only by your energy, time and imagination.

### HOW TO DO IT

Next you must decide how you want to obtain the black-and-white image with which to work. You have a choice of shooting black-and-white transparencies and toning them or shooting color transparencies, then copying them onto black-and-white transparencies and toning. I recommend the latter method for the simple reason that if for any reason the subject cannot be reshot and you accidentally botch the developing or decide it looks unacceptable when toned brown, you still have the original color slide to start with again. You can use Kodak Panatomic-X or Kodak Direct Positive Panchromatic Film 5246. Either works well, but the Panatomic-X is more readily available. If you use Panatomic-X, shoot it at E.I. 64 with tungsten light and E.I. 80 with sunlight, instead of its normal ASA 32.

If you decide to copy from color slides but don't have a slide copier, you can build one for only a few dollars using the instructions given in the February, 1974 issue of *PhotoGraphic*. The title of the article, "Build Your Own Slide Copier," misled me. I expected to find instructions for building a slide duplicator—a combination of a long extension tube or bellows to separate the lens from the camera body and a diffusion

screen with a slide holder to fit in front of the lens. What the article describes instead is a diffusion reflector box to be used with an electronic flash or other light source. This is a very convenient device, as it allows you to work independently of the sun with its accompanying problems of color temperature and availability. However, you will still need a bellows or extension tubes. I use a 2X extender with the lenses removed and a reverse lens adapter with 55mm lens. This combination gives me slightly more than 1:1 reproduction. The article also clearly explains how to determine proper exposure for copying, so I suggest you read it if you aren't already familiar with the processes involved.

You should now have a roll of exposed film, and you're ready to begin. You will need the following:

1. *Kodak Direct Positive Developing Outfit*—This kit can be purchased at your camera store for about \$7. It contains chemicals to make five pints of redeveloper and one quart each of first developer, bleach bath and clearing bath. The redeveloper should be mixed one pint at a time just before processing because its shelf life is only two hours; it must be discarded after that time. It will redevelop two 36-exposure lengths of film if used within the two-hour limit and if the second roll of film is processed for one additional minute.

The other chemicals in the kit may be mixed ahead of time and stored for later use. They will process at least 10 rolls of 36-exposure film.

**1A. Original color transparency of church and boardwalk at Fort Steele Historic Park, B.C., Canada.**

**1B. Black-and-white duplicate of 1A.**

**1C. Black-and-white duplicate of 1A toned brown.**

**2A. Original color transparency of restored stagecoach at Fort Steele Historic Park, British Columbia, Canada.**

**2B. Black-and-white duplicate of 2A.**

**2C. Black-and-white duplicate of 2A toned brown.**

**3A. Original color transparency of wild burros near the western boundary of Death Valley National Monument, California.**

**3B. Black-and-white duplicate of 3A.**

**3C. Black-and-white duplicate of 3A toned brown.**

**4. Brown-toned transparency of billboard in Winthrop, Washington.**

**5. Brown-toned transparency of abandoned buildings at the mining town of Bodie, Bodie State Park, California.**

**6. Brown-toned transparency of mountain and lake scene in the Great Northwest.**





1A



1B



1C



2A



2B



2C



3A



3B



3C



4



5



6



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# OLD-TIME LANTERN SHOWS

2. *Fixer*—The kit does not include fixer, but any film fixer will work. I use Kodak Rapid Fix with fine results. Mix according to manufacturer's instructions.

3. *Brown toner*—Any toner designed for use with black-and-white paper is acceptable.

4. *Slide mounts*—Use heat-sealing mounts, such as Kodak Ready Mounts, for permanence.

5. *Developing tank and reel*

6. *Chemical containers*—You'll need four one quarts and one one-pint size.

7. *Thermometer*

Mix the solutions according to packaged directions and place them in a water bath to stabilize at 68°F. Other processing temperatures may be used if the processing times are changed, using Kodak's recommendations in the kit's instructions. Next load the film in the developing tank.

## PROCESSING PROCEDURE

1. *First developer*—Develop eight minutes with small spiral reel and tank at 68°F. With this and other solutions tap tank sharply to release air bubbles from film, agitate continuously for first 30 seconds and for five seconds every minute thereafter.

2. *Water rinse*—Wash film two to five minutes in running water with agitation.

3. *Bleach bath*—Bathe for exactly two minutes. Bleach will corrode metal; wash all surfaces as soon as possible.

4. *Clearing bath*—Bathe for exactly two minutes.

5. *Redeveloper*—Use this for eight minutes at 68°F. Redeveloper will not keep more than two hours; use fresh batch after that. Process second roll for nine minutes in same solution.

6. *Water rinse*—Rinse for one minute in running water with agitation.

7. *Fixing bath*—Fix for five minutes.

8. *Final wash*—Wash for 20-30 minutes in running water or rinse in water for 30 seconds; rinse in hypo-clearing agent solution for one to two minutes, then wash for five minutes.

While film is washing, mix brown toner. When the wash is complete, drain wash water and pour toner into tank with the film. I use Kodak brown toner at 100°F. for four minutes to obtain the intensity I like. The solution can be used again, but it will take longer to obtain the desired effect

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1. Setup for slide duplicating includes enlarging stand, electronic flash and the reflector diffusion box described in "Build Your Own Slide Copier" (see text for details).

2. Shown here are the materials you'll need to complete the old-time lantern process. They include: film fixer, chemical containers, thermometer, Kodak Direct Positive Developing Outfit, brown toner, Kodak Panatomic-X Film and developing tank.

All photos taken with Minolta SR-T101 and 35mm, 55mm or 135mm Rokkor lenses and Kodak Kodachrome II Film; exposures not recorded.

each time it is used. When you have the color you like, rinse the film in running water for 10-15 minutes, immerse in a wetting agent solution or distilled water for 30 seconds and hang to dry in a dust-free area. After the film is dry, cut the individual frames carefully with scissors and mount in standard cardboard mounts.

Making slides that evoke the mood of a bygone era is as simple as this. You now have the ingredients for a unique slide show that's just about guaranteed to thrill and captivate your audience. While you're at it, you can enhance your presentation by playing some old-time phonograph records, or if you have a piano, getting someone to play ragtime tunes, just to recreate and complete a total environment. □

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# Technical Index Data Sheet

By Parry C. Yob

## ILFORD FILMS IN KODAK HC-110 31:1 (DILUTION-B)

Kodak calls it Dilution-B, and others call it 31:1, but in any case it is made by adding one part HC-110 stock solution to seven parts water. Stock solution is made by diluting 16 ounces of Kodak's concentrate with sufficient water to make 64 ounces (½ gallon). The arithmetic of 31 to 1 can be confusing, so think of it this way. Sixteen ounces of concentrate in a total of 64 ounces is one part concentrate plus three parts water, so the concentrate is one part in four, and stock solution is therefore 1:4 or ¼. When stock solution is diluted 1 to 7 we have one stock plus seven water for a total of eight parts—therefore, 1:8 stock or ⅛. Now ⅛ x ⅛ = 1/32, so dilution B is one part concentrate out of a total of 32 or one concentrate plus 31 water = 32 working solution.

Some very successful workers use one ounce concentrate plus 31 ounces of water to make

one quart of HC-110 working solution Dilution-B (which they call 31:1).

### 70°F. DEVELOPMENT TIMES ILFORD FILMS IN KODAK HC-110 (31:1) DILUTION-B

| Film  | ASA | Time Minutes* | Roll Type |
|-------|-----|---------------|-----------|
| Pan F | 50  | 4             | 35 & 120  |
| FP4   | 125 | 5             | 35 & 120  |
| HP4   | 500 | 5½            | 35 & 120  |

\* Continuous agitation first 45 seconds including tank filling time. Rest 15 seconds, then agitate every 30 seconds by inverting tank twice and then shaking bubbles free. These are recommended starting times for enlargements on No. 2 graded paper or using a No. 2½ filter with Kodak Polycontrast Rapid paper. You may need to adjust times to suit your shutter and aperture calibration errors.

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# SPEC SHEET

## MINOLTA SR-T201



**Shutter:** Focal-plane type with speeds from one second to 1/1000, plus B.

**Mirror:** Automatic, instant-return type with lock-up capability.

**Automation:** None

**Exposure Meter:** Through-the-lens metering using two CdS cells located on pentaprism. System employs a light-contrast compensating function (CLC). ASA range 6-6400.

**Frame Counter:** Automatic, additive resetting displaying frames exposed in window adjacent to shutter release.

**Film Advance:** 150° single stroke or several short strokes wind film, reset counter and cock shutter.

**Flash Synchronization:** Two PC terminals, one for strobe and one for FP bulbs. Electronic flash is synched up to 1/60 second. X terminal may be used for F bulbs up to 1/30 second and MF bulbs up to 1/15 second.

**Accessory Shoe:** Located on top of pentaprism and incorporates X synchronization terminal.

**Self-Timer:** A 10-second delay can be activated by a lever on front of camera body. Delay action can be cancelled by pressing a release button.

**Battery:** One 1.35-volt mercury battery is located in chamber in bottom of camera body. Mallory PX-625, PX-13 or Eveready EXP-625 or EPX-13 or equivalent may be used.

**Battery Check:** Check switch located on camera base. Indicator needle in viewfinder will point to battery checkmark if battery is working.

**Lenses Available:** Two full ranges of lenses are available including the standard Rokkor-X series with focal lengths from 16mm to 1600mm, including two mirror optics and two zoom lenses. Budget-priced Minolta/Celtic lenses are available in focal lengths from 28mm to 200mm, including one zoom lens and a 50mm macro.

**Accessories:** Accessories include close-up lenses, an extension tube set, bellows, slide copying attachment, copystand, viewfinder magnifier and angle finder, microscope adapter, flashbulb unit, four electronic flash units, solid glass filters, eyepiece correction lenses, panorama head and adapters for Praktica and Leica mount lenses. A variety of sizes and types of cases is available.

### COMMENTS

The SR-T201 is a member of a very comprehensive family of system cameras and accessories. This particular model has most of the more frequently used features of a professional-type camera at a more modest price. That such a full range of lenses and options are available, including many Leica accessories, makes the SR-T201 a prime choice for the enthusiast who expects to add to his camera many of the features of a system but wishes to begin moderately.

The camera is easy to operate with well-placed, easy-to-read and operate controls. Minolta is well known for the excellence of the many diverse optics offered. Combined with an oversized reflex mirror and a well-conceived metering system, with the shutter speeds indicated in the viewfinder, fast and efficient picture taking should be possible.

The overall design of the camera has been refined to make it one of the more pleasurable 35mm SLRs to use, with enjoyable results assured. Minolta should be congratulated for concentrating its attention on the practical features that this model offers to the photo enthusiast.

**TYPE:** 35mm single-lens reflex

**LENS MOUNT:** Minolta bayonet

**SIZE:** 5 3/4" long x 3 3/4" high x 1 1/4" deep (145mm x 95mm x 47.5mm) (body only)

**WEIGHT:** 24.8 oz. (705g) (body only)

**BASIC PACKAGE:** Camera body, normal lens, front and rear lens caps, body cap and battery. Neck strap provided with camera case when purchased with camera.

**PRICES:** Camera with 50mm f/1.7 lens, \$370; with 50mm f/1.4 lens, \$450; with 58mm f/1.2 lens, \$490. Camera case \$25 extra when purchased with camera.

**DISTRIBUTOR:** Minolta Corporation, 101 Williams Drive, Ramsey, New Jersey 07446

### FEATURES

**Viewfinder:** Fixed eye-level pentaprism with non-removable focusing screen featuring a central microprism spot with matte collar and Fresnel lens in the surrounding area.



PhotoGraphic's

# SPEC SHEET

## MINOLTA SR-T202



**TYPE:** 35mm single-lens reflex

**LENS MOUNT:** Minolta bayonet

**SIZE:** 5 3/4" long x 3 3/4" high x 1 1/2" deep (145mm x 95mm x 47.5mm) (body only)

**WEIGHT:** 25 oz. (710g) (body only)

**BASIC PACKAGE:** Camera body, normal lens, front and rear lens caps, body cap and battery. Neck strap provided with camera case when purchased with camera.

**PRICES:** Camera with 50mm f/1.7 lens, \$420; with 50mm f/1.4 lens, \$465; with 58mm f/1.2 lens, \$540. Camera case \$25 extra when purchased with camera.

**DISTRIBUTOR:** Minolta Corporation, 101 Williams Drive, Ramsey, New Jersey 07446

### FEATURES

**Viewfinder:** Fixed eye-level pentaprism with non-removable focusing screen featuring horizontal split-image rangefinder, microprism collar and remaining area matte with Fresnel lens. Both shutter speeds and aperture settings visible in viewfinder.

**Shutter:** Focal-plane type with speeds from one second to 1/1000, plus B.

**Mirror:** Automatic, instant-return type.

**Automation:** None

**Exposure Meter:** Through-the-lens metering using two CdS cells located on pentaprism. System employs a light-contrast compensating function (CLC). ASA range 6-6400.

**Frame Counter:** Automatic, additive resetting displaying frames exposed in window adjacent to shutter release.

**Film Advance:** 150° single stroke or several short strokes wind film, reset counter and cock shutter.

**Flash Synchronization:** One PC terminal with a switch to change function from X to FP. Electronic flash is synched up to 1/60 second. FP bulbs may be used at all speeds, while M and MF bulbs are synched 1/15 second and below.

**Accessory Shoe:** Located on top of pentaprism and incorporates both X and FP synch functions.

**Self-Timer:** A 10-second delay can be activated by a lever on front of camera body. Delay action can be cancelled by pressing release button.

**Battery:** One 1.35-volt mercury battery is located in camera base. Mallory PX-625, PX-13 or Eveready EXP-625 or EXP-13 or equivalent may be used.

**Battery Check:** Check switch located on camera base. Indicator needle in viewfinder will point to a battery checkmark if battery is working.

**Lenses Available:** Two full ranges of lenses are available including the standard Rokkor-X series with focal lengths from 16mm to 1600mm, including two mirror optics and two zoom lenses. Budget-priced Minolta/Celtic lenses are available in focal lengths from 28mm to 200mm, including a zoom lens and 50mm macro.

**Accessories:** Accessories include close-up lenses, an extension tube set, bellows, slide copying attachment, copystand, viewfinder magnifier and angle finder, microscope adapter, flashbulb units, solid glass filters, eyepiece correction lenses, panorama head and adapters for Praktica and Leica mount lenses. A variety of sizes and types of cases is available.

### COMMENTS

The SR-T202 is a variation of the same design as the SR-T201 with some special features of its own. Probably the most apparent additional function is the inclusion of the aperture setting visible in the viewfinder. This further aids the photographer when following action or taking pictures rapidly.

For those who use flash the switching that allows both X and FP synchronization through both the PC terminal and the hot shoe is convenient, while the lack of a mirror lock-up capability might be missed by those who work with low shutter speeds with the camera on a tripod.

The Minolta SR-T202 has one feature that allows a technique that seems to be growing in popularity. The shutter may be cocked without advancing the film by depressing the film advance release button, so multiple exposures can be made.

Like the SR-T201, the SR-T202 is a camera that is made for easy handling. With a split-image rangefinder included in the viewfinder's center, the SR-T202 design is even more suited for fast action photography than the SR-T201. Minolta has done well to put together two models that incorporate a variety of features that will help make picture taking even more efficient, mistake-free and enjoyable.



# SKY CONTROL WITH SOLARIZATION

A New Way To Darken Skies  
And Add Clouds To Black-And-White Prints

By William L. Jolly



This picture of the marketplace in the medieval German town of Rothenburg ob der Tauber was taken shortly after a rain. In the normal print the sky is completely white. Note how solarization draws attention to the triangular facade of the building in the background and gives an interesting white border to the silhouetted metalwork of the signs. Print made on Agfa Brovira No. 4 paper, using undiluted Solarol stock. Initial development 85 seconds; final development 30 seconds.

**E**very black-and-white printmaker knows that pictures of outdoor scenes which include the sky are usually more pleasing if the sky is not rendered pure white. The prints are also much improved if clouds are shown when the sky fills a large portion of the print area. Often, an otherwise uninteresting outdoor shot is dramatic and exciting simply because

the sky contains large and unusual cloud formations. In the attempt to darken skies and to make clouds more prominent, photographers often use polarizers and yellow, orange or red filters on their cameras. Unfortunately, polarizers and filters are most effective when the sky is blue and when the sun is at an angle of about 90° from the direction of view. Prints taken on



# SKY CONTROL

overcast days or when the camera is pointed in the direction of the sun show practically pure white, uninteresting skies, in spite of polarizers and filters.

What can you do in the darkroom to improve white skies? One common remedy is to dodge the foreground during enlarging—that is, to "burn-in" the sky area so that the sky receives a longer exposure in the enlarger than the foreground. However, when this technique is used, it is difficult to avoid a too-light or too-dark transition zone near the border between the sky and foreground, especially when irregularly shaped subjects are silhouetted against the sky. Another remedy is to "flash" portions of the sky—that is, to shine a small flashlight directly on the enlarging paper where darkening of the sky is desired. This process is easily overdone and can give the print an artificial, manipulated look. Still another, much more difficult, technique is to combine negatives by printing the original negative with another negative containing a cloudy sky scene. Such double printing is tedious and, if the masking is not done very carefully, yields a final print showing an obvious boundary zone between foreground and sky.

## HOW TO DO IT

Sounds discouraging, doesn't it? But take heart! A simple new process, based on the Sabattier Effect (usually called solarization) can now be used to darken and add clouds to skies during the processing of photographic prints. Before we get into the details of this process, let's review the general phenomena associated with print solarization. Print solarization requires no special equipment. However, there are two important requirements with respect to the materials used.

The first requirement is that you use Solarol, the developer specially formulated for enhanced solarization printing. This developer is available in dry powder form for preparing ½ gallon of stock solution. It can be bought in many photographic supply stores for \$2.50, or it can be obtained directly from the Solarol Company, P.O. Box 1048, El Cerrito, California 94530, for \$3 postpaid. The developer is accompanied by a descriptive brochure describing its use in solarization.

The second requirement is that you use an enlarging paper that undergoes solarization readily, such as Agfa



1A. Solarized print



1B. Straight print

1. An orange filter was used to take this picture of the Fort Point lighthouse beneath the Golden Gate Bridge in San Francisco. Nevertheless, normal printing gives a rather pale sky, with slightly more density on the right side. Solarization not only darkens the sky but also emphasizes its grain structure. The effects of the solarization can also be seen in the lighthouse itself, where the highlights are rendered black. Print made on Agfa Brovira No. 5 paper, using Solarol 1:1. Initial development was for 90 seconds; final development for 75 seconds.

2. Picture of the two mission bells of El Rosario, Mexico, was taken on a heavily overcast day. Normal printing produces an almost pure white sky. The clouds were introduced by a kind of double exposure. After normal exposure of a sheet of Agfa Brovira No. 5 paper in the enlarger, a positive photograph of white clouds in a dark sky was pressed face down on the print under a sheet of glass. Then a 25-watt bulb, four feet above the paper, was turned on for three seconds, and the double-exposed paper was developed in Solarol 1:1. Initial development was for 65 seconds; final development for 30 seconds.

3. The famous footbridge across the River Liffey in Dublin, Ireland, was photographed on a cloudy, overcast day. Solarization makes the sky dramatic and gives the lamp supports a white outline. The sky appears essentially as a negative of the original sky area. Print made on Agfa Brovira No. 4 paper, using Solarol 1:1. Initial development was for 70 seconds; final development for 40 seconds.

Brovira, Ilfobrom, Luminos RD or Luminos N paper. Unfortunately, Kodabromide and Polycontrast papers do not solarize well.

Print solarization is carried out as follows: After developing a print for 40 to 100 seconds, turn on a white light over the developing tray for several seconds. Continue development for 30



2A. Solarized print



2B. Straight print





**3A. Solarized print**

to 60 seconds more, then rinse the print in a stop bath, fix and wash as usual.

This simple treatment transforms the print remarkably. Regions of the print which, immediately before turning on the white light, were darker than a certain very pale gray (the "critical density") are desensitized toward further exposure to light (however, development of the original latent image continues during the second development period), and in these regions the final print looks as it would

if no white light had been turned on.

On the other hand, regions of the print which, immediately before turning on the white light, are white or have a density less than the critical pale gray density, will be fogged by the white light and subsequently develop to a uniform gray or black.

The brighter the light you use, the greater the density in the fogged regions. When Solarol developer (diluted 1:1) is used, a 100-watt bulb about three feet from the developing tray produces a deep black fog. Under



**3B. Straight print**

the same conditions a 40-watt bulb produces a gray fog. As long as the white light exposure is longer than about  $\frac{1}{2}$  second and shorter than about 15 seconds, fog density is independent of exposure time. Now, if you have all these facts in mind, you are ready to apply solarization printing effectively and predictably.

#### **WHEN TO DO IT**

Suppose you have a negative which, when printed normally, gives a picture with a completely white, washed-out sky. By increasing the exposure in the enlarger, you can obtain some sky density in such a print but only at the expense of making everything else in the print too dark. When the print is processed so the main subject matter has optimum density, the density of the white, washed-out sky is less than the pale gray critical density, and simple solarization can be used to fog the sky area to any desired density, from pale gray to deep black. If the main subject matter in the negative has normal contrast, use a moderately contrasty paper, such as Agfa Brovira No. 4 or No. 5 paper; if it has low contrast, use an extremely contrasty paper, such as Agfa Brovira No. 6 paper. All of these specifications assume you're using Solarol developer, diluted 1:1.

Determine the exposure in the enlarger that yields a pleasing image of the subject with normal two-minute development. Expose a sheet of paper this way; develop it for about 70 seconds; turn on a fairly weak white light (say a 40-watt bulb) about three feet over the tray for about three seconds, and continue the development for 50 seconds more. Rinse in a stop bath and transfer to the fixer. Turn on the white light and



# SKY CONTROL

examine the print. If you think the sky looks too dark, weaken the white-light exposure by using a lower wattage bulb or by placing the light higher over the developing tray. If the sky is too light, intensify the white-light exposure by making the opposite adjustments.

I find it convenient to control the intensity of the solarizing white light with a simple electric light dimmer, available for about \$4 in most hardware stores. The dimmer must be properly adjusted *before* each exposure; the light is actually turned on and off with a separate switch.

## WHAT IT DOES

If a normally developed print shows a slight amount of density in the sky, solarization will probably give the sky a mottled, grainy appearance. This effect occurs because the initial development of the sky area does not give a perfectly uniform density. Those areas which develop to less than the critical density are not fogged by the white light and remain relatively light. This mottling gives a textured effect to the sky that can be quite pleasing in many prints. However, if you feel that the effect is inappropriate for a particular picture, and you'd rather have a uniform, texture-free sky, you have two options. First, you can hold back the sky during exposure in the enlarger by dodging, but this procedure can be tricky and somewhat defeats the purpose of the solarization. Second, you can use a higher contrast paper so that the initial development produces an essentially white sky area when the subject matter is fully developed. Of course, the second method may yield a too-contrasty print. Too bad we can't have our cake and eat it too!

Now let's say you have a print showing a light, overcast sky in which the clouds are discernible but not prominent. Solarization causes a dramatic change in the sky and gives an air of mystery to the print. The white areas become dark, and the pale gray areas remain pale gray. If most of the sky develops beyond the critical density in the initial development, the solarization produces a small effect.

The remedy is to reduce the exposure in the enlarger or to use a more contrasty paper so that more of the sky remains white in the initial development. On the other hand, if most of the sky area initially develops short of the critical density, solarization produces too much darkening. In this



4A. Straight print

ALL PHOTOS BY THE AUTHOR



4B. Regular solarization



4C. Snapped-up version of solarization





5A. Strip developed normally for 50 seconds



5B. Solarized strip



5C. Strip developed normally for 103 seconds

4. "Normal" solarization of picture of maze of wires emanating from a utility pole lacks punch (4B). However, by making a paper negative and then using it to make the final print on contrasty paper, the whites are cleaned up, and a snappy print is obtained (4C).

5A. The nature of the Sabattier Effect (solarization) is clearly shown by three strips of paper, which were given identical increasing exposures in steps. The first strip was developed normally for 50 seconds.

5B. The second strip was developed for 50 seconds, exposed to a white light for three seconds and then developed for an additional 50 seconds.

5C. The third strip was developed normally for 103 seconds (for the same time that the second strip was in the developer). Note that the segments of density greater than the pale gray critical density are essentially identical to the corresponding segments of the second, solarized strip.

case the remedy is to increase exposure in the enlarger or to use a less contrasty paper.

I am particularly excited by the use of solarization to add clouds to a completely white, bald sky. To do this first expose the paper in the enlarger so that normal development would yield a pure white sky. Now position a black-and-white print of a dark sky with an interesting formation of white clouds face down on the exposed paper. Flatten the two sheets with a sheet of glass and turn on an overhead lamp for several seconds (this time must be determined by trial). The twice-exposed paper is then developed and solarized. If the exposure through the cloud print is right, the sky regions of the paper beneath the dark sky of the cloud print initially develop to a density less than the critical density and then end up dark after solarization. The sky regions beneath the white clouds of the cloud print initially develop to a density slightly greater than the critical density and then remain light after solarization.

In other words, a direct positive image of the cloud scene appears in the sky area of the print as if by magic! The nicest feature of the process is that no masking is required. The amount of light passing through the cloud print during the second exposure is so small that, in all the regions of the print except the sky area, it can be ignored.

Now let's suppose you want to solarize the sky area of a print, but the main subject has light areas that you don't want to solarize. It's simple. During the white-light exposure, dodge the print area that you don't want solarized. This dodging can be done with the hand or, better, with a piece of black plastic sheeting or a card that can be immersed in the developer.

All the usual tricks for varying the contrast of a print can be used in conjunction with solarization. For example, contrast can be increased by using a more concentrated developer (say, undiluted Solarol stock) or by warming the developer solution; contrast can be decreased by diluting the developer (say, 1:2 or even 1:3). If you want to lighten the highlights of a solarized print to give the print more snap, a treatment with dilute ferricyanide followed by hypo (Farmer's Reducer) can be used. Even greater contrast can be achieved by using a paper internegative made on high contrast paper.

Solarization is no longer a hit-or-miss technique. Just like any other technique, it can be controlled, and you don't have to get weird effects. Add solarization to your photographic repertoire, and you'll be amazed how often you use it in printmaking. □

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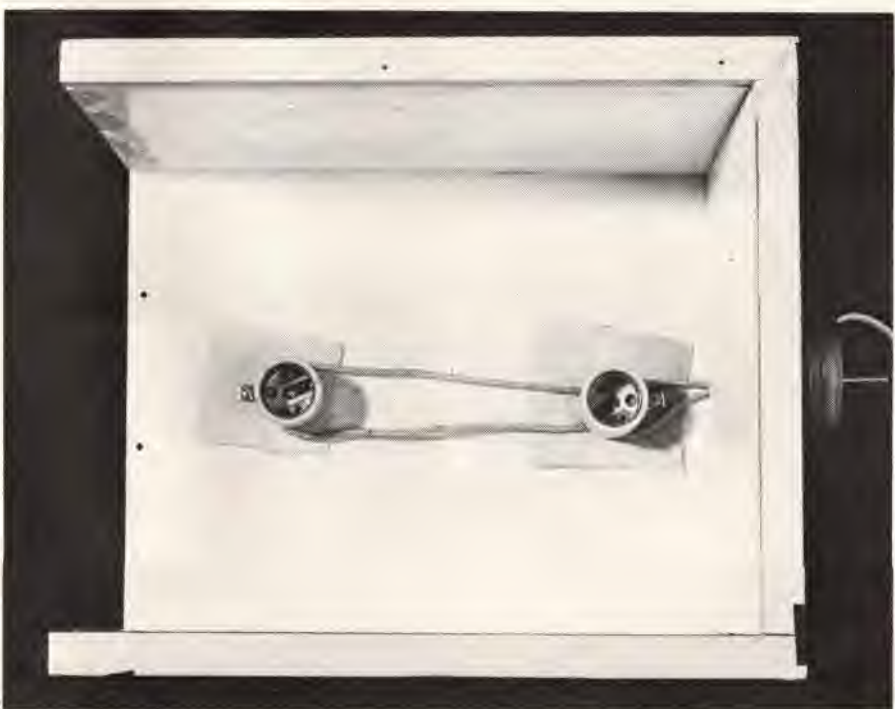
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# darkroom lighting

## PART





# EVERYTHING YOU SHOULD KNOW ABOUT BUILDING YOUR OWN SAFELIGHTS

by PARRY C. YOB



**J**udging by the letters I get, there are a lot of people who just can't seem to get the truth about certain photographic facts. They get a half-dozen different answers from as many different sources, then write and ask to be further confused. But I won't answer questions unless I've actually made my own tests, and I have a good reason for this approach. The reason is that photographic reference books are full of information that has been copied from book to book for 50 years or more and had no firm basis in fact in the first place.

Not all the misinformation is old, however. There are books with 1975 copyrights that discuss Callier's "Q" as applied to the light sources of enlargers, although Callier's 1909 constant has little or no relation to modern emulsions. There are also people, including manufacturers, who write about safelights as though they had never seen the inside of a darkroom, much less run any kind of objective test to determine what is or is not needed by the average worker. To simplify, bear in mind that what follows is based on what is going on in my darkroom right now with modern films and modern enlarging papers, and if it fails to agree with something in some other publication, that is irrelevant!

First off, panchromatic films, color films and color printing papers should be handled in *total darkness* and processed in tanks and drums that are lighttight. The safelights that can be used for panchromatic films are far too dim to be used to make any sort of realistic judgment as to the state of development, and if the developing film is held close enough to the light to even see the shape of the image, you'll fog it enough to lose quality. This is true no matter what wattage lamp you use, because you just can't see until you have sufficient light to fog.

With color papers the safe safelight is too dim to be of any value, and even if you could see the image forming, how much could you judge about density or color balance in dim brown light?

For orthochromatic films and materials that are sensitive only to blue light,

I find the red safelights recommended by manufacturers are both safe and bright enough for these purposes. I use a bright red safelight with Kodalith films in conjunction with the recommended 15-watt bulb and have plenty of light. With high speed orthochromatic films, such as Kodak Tri-X Ortho sheet film, I process in total darkness because I find these films require constant agitation to eliminate processing streaks, mottle, etc. With the slower Kodak Commercial films, I use the recommended red safelight and bulb size.

Black-and-white papers are an entirely different situation. Many years ago I used bright yellow OA safelights for both contact printing and enlarging papers. I could still use these same safelights with the majority of enlarging papers without any problems at all. In fact, sometimes I switch to these when I do a lot of printing on graded papers for jobs where I control print density by development time to correct for errors in exposure. However, this is not the way to get the optimum performance from enlarging papers, but when prints are going to a photoengraver who prefers slightly muddy images and will adjust the contrast to suit the publication, there is no use giving high quality exhibition prints with contrast beyond his ability to adjust.

Sometimes I'm tempted to go back to using nothing but graded papers and bright safelights, but this has its problems too. About one negative in a thousand needs to be printed on more than one grade of paper. That is to say that there are some parts of the picture that are excessively contrasty, and other parts of the picture which are completely lacking in contrast. Usually this happens when I'm required to make a natural-light shot indoors with sunlit windows in the background, or I'm forced to include a highly reflective area in some overall view. Of course, Murphy's law applies in this case, and as soon as I start switching to graded papers and yellow safelights, I run into five of those one-in-a-thousand negatives in one day. Then, too, it is cheaper for me to keep buying Kodak Polycontrast Rapid F than it is to retain stocks of several paper grades.

1. Complete variable power safelight. Notice mounting bracket is arranged to allow light to swivel in its carriage so illumination can be directed where it is most needed. Light can be mounted either on wall or ceiling.

2. Interior of safelight box. Notice asbestos paper under fixture sockets and location of sockets. Also observe arrangement and location of connecting wires. Interior of box and metal back are given one coat white gloss enamel paint before sockets were installed.

3. Wood spacers are placed on carriage bolts. These were scrap plugs of plywood coming from hole-saw cuttings and are round, but square spacers will do as well.

4. Safelight box with glass filter slipped part-way into grooves.



# DARKROOM LIGHTING

Over the years, paper manufacturers have gradually changed their safelight recommendations for graded papers so that they now recommend the brown colored OC safelights for both graded and multicontrast papers. As far as I can tell, they haven't done anything to the graded papers that makes them any more sensitive to the yellow safelights, but they have simply conditioned photographers to working in dimmer light. As new generations appear, they no longer realize that things could be better, and they use OC safelights for everything. After all, the OC is safe for any kind of paper, whether graded or ungraded.

The trouble is that papermakers also recommend some mighty dim bulbs, which they tell you to use about four feet from the developer tray or four feet from the enlarging easel. The poor photographer just sticks with the recommended bulb size even though the safelight may be 10 or 15 feet from the easel. In larger darkrooms one often sees a half-dozen safelights glowing dimly, with little or no illumination except directly under the safelight. Almost nobody takes the trouble to run a simple test to determine just how much light can safely be used without fogging the paper, and most workers depend on manufacturers' recommendations, which have a huge safety factor built in. To top things off, commercial safelights get pretty hot to the touch even with little bulbs, and putting in bigger bulbs and running them hotter could be dangerous.

## SOLVING THE PROBLEM

One solution that I tried for a while was to use two safelights, one directly over the developer tray and the other about three feet off to one side. But, finally, putting up two safelights at a cost of \$75 each made no sense at all. So I finally devised a variable powered safelight, made at the cost of a safelight glass and \$7 for a switch. With my homemade unit I actually got about 10 times as much light and built the entire unit from scrap materials that I found around the garage.

## BUILDING THE SAFELIGHT

The unit shown here is made for a 10x12-inch safelight glass, and I don't recommend that you go for anything smaller. However, you can build your light for the 10x12 glass and insert a piece of 10x12 cardboard in the slot for the glass, then cut a hole for a 5x7-inch rectangular glass or a five-



5. Complete safelight mounting bracket. You may not need bottom 1x6 strips which appear beneath the 1x8 baseboard, but these were used to bridge 16-inch gap between floor joists which form ceiling of my darkroom. The vertical 1x2 was nailed and glued to one end, and the 1x2 on opposite end was attached with 1½-inch No. 10 wood screws, but experience shows that better results will be had by using two wood screws to mount each of the vertical pieces on baseboard.

6. Hypo light, ready to hang over the tray.

inch round glass, which is cheaper, and one you might have on hand. Later you can replace the small glass when you can afford it. Starting with this 10x12 dimension, you simply build a box from 1x12-inch lumber to accommodate the glass.

My unit used 13-inch long side-boards and 9½-inch end boards cut from nominal 1x12 lumber, about 11½ inches wide. To make these pieces I took a four-foot long piece of scrap lumber and made a ¼-inch wide groove the full length of the board about ½-inch in from the edge. This groove was cut a tiny bit more than ¼-inch deep. Actually, the saw was set for 5/16-inch depth of cut, and two passes were made, each cutting a width of about ⅛-inch side by side. Since the tips of the saw teeth cut a little deeper than the rest, the cut of the slot was just over ¼-inch deep. If you use the saw method, keep in mind that within limits, it's better to have the slot too deep than too shallow. After making the slot, cut the board into the four required pieces, making sure that the lengths are exact and the cuts square with the edges of the board.

I want to mention now that you can cut two side pieces 9½x13 and two end pieces 9½x9½, making all four pieces from ¾-inch plywood, then cut a ¼-inch groove ½-inch in from the edge of each piece. However, if you use plywood, it should be AB grade because poorer grades often have hollow spots which mess up grooves and make building lightboxes a nightmare.

Note carefully that the end pieces go between the side pieces so that all of the grooves line up on the inside. Also



be sure to notice that the side pieces are nailed to the end piece on one end only. On the other end the piece is inserted between the sides, but it is held in place with six No. 10 flat-head wood screws 1½-inches long. This procedure allows you to insert and remove light bulbs when they burn out, and you won't be trying to drive nails next to an expensive piece of safelight glass! Assemble the sides to the ends, drilling and fitting for the screws before making a trial insertion of the safelight glass, then remove the end which is held by screws and insert the glass. The loose end should slide easily into place with the glass in the slots.

The next step is to cut an 11x13 piece of galvanized sheet steel to form the back of the lightbox. This metal back serves to radiate the heat of the two 40-watt bulbs when the lamp is used at full power, and only thin metal is suitable for this purpose. Drill two holes for the mounting bolts which will hold the appliance sockets in place along the centerline of the sheet. Then drill a dozen ⅛-inch holes around the outside edge of the metal, placing three holes along each edge. These holes are for the ⅜-inch No. 6 round-headed wood screws which are used to attach the back to the sides and ends of the box.

Before attaching the back to the box, mount the two appliance sockets, using small stove bolts. Before attach-



ing the sockets to the metal, place pieces of asbestos paper between the sockets and the metal. These pieces of asbestos serve as electrical insulation should any mishap cause a wire to come too close to the metal back. Probably any electrical insulating material would do, but asbestos has fire-resistant properties. You should attach all necessary wiring to sockets *before* mounting, since binding screws are on bottoms of sockets where you can't get at them once they are mounted on the metal back.

The sockets are wired in parallel, which means that a wire is connected from the left binding screw of one socket to the left binding screw of the other socket, and another wire is connected from the right binding screw of one socket to the right binding screw of the other socket. Then one of the sockets is also connected to the power cord. That is to say that each of the appliance cord wires is connected to a different binding screw on one of the sockets. A  $\frac{3}{8}$ -inch hole must be drilled through the end board to accommodate the appliance cord.

At this point, you can place light bulbs in each of the sockets, and they should both burn at full power. Now unplug the cord again and connect the Add-On lamp cord dimmer switch. To do this you can simply follow the instructions on the package, or you can cut one of the leads (wires) of the appliance cord and remove the insulation from each of the ends of the cut piece for about  $\frac{1}{2}$ -inch. Now take a two-foot length of two-wire No. 18 bulk appliance cord and bare both wires at one end. Attach each of these bare wires to one of the ends of the cut section of the main cord by twisting and soldering, then insulate each joint with plastic electrical tape. At the other end of the bulk wire, bare short sections and attach each of the wires to different binding screws on the Add-On dimmer. This latter connection was used for the safelight illustrated in the photos and was most convenient because it allowed the dimmer to hang down well below the light, which was mounted on the darkroom ceiling. This is also an on/off switch as well as a dimmer and can be used both to regulate the light output of the safelight and to turn it on and off.

With the dimmer and the two 40-watt light bulbs in place plug the appliance cord into an outlet and check to see that the dimmer is working properly. It should easily vary the light from full off to full on.

Now drill a  $\frac{1}{4}$ -inch hole in the exact center of each of the end pieces of the lightbox. These holes can be drilled at any time prior to final assembly;  $\frac{1}{4}$ x4-inch carriage bolts are inserted in the holes with their heads on the inside of the safelight box. It's a good idea to tap the heads down into the holes so that the square shanks form their own sockets to prevent turning later. Care should be used not to strike the lamp sockets with the hammer.

With the bulbs in place and the dimmer working properly slip the safelight glass in place and put the loose end into the box. Screw the end to the sides and attach the back to this end with the remaining round-head screws. Then in a dimly lighted room, turn the light on full power and check for light leaks. There will be leaks where the metal back meets the wooden parts, and these, along with any other leaks where the joints in the wood are not tight, must be sealed with black masking tape. No white light should come out anywhere. Be sure to seal the hole around the power cord where it passes through the wooden end of the box.

At this point there are a lot of different ways to hang your safelight. These include putting eye screws into the sides of the box and using chain to hang the light or using a mounting bracket such as the one seen in the photos. To use the latter method cut two 10-inch pieces of 1x2 pine and drill a  $\frac{1}{4}$ -inch hole through each at a point one inch in from one end and in the center of the flat side (wide side) of the wood. At the opposite end, drill two holes to accommodate  $1\frac{1}{2}$ -inch No. 10 wood screws, which will be used to attach the piece to the base.

The base is a  $14\frac{1}{2}$ -inch piece of 1x8-inch lumber or  $\frac{3}{4}$ -inch plywood, and the previously cut and drilled strips are attached to its ends. First, however, you'll need some spacers made from  $\frac{3}{4}$ -inch and  $\frac{1}{4}$ - or  $\frac{1}{8}$ -inch wood or hardboard. The ones shown here are nice and round because they are the cutouts that result from using a hole saw and already have  $\frac{1}{4}$ -inch center holes. You can use 2x2 squares of suitable thickness material, placing them over the carriage bolts after drilling  $\frac{1}{4}$ -inch holes in their centers. Use enough spacing blocks at each end so that the 1x2x10 pieces can be slipped over the carriage bolts and tightened with nuts while the other ends of the 1x2s are tight against the ends of the base. Then use wood screws to attach the ends to the base.

In the mounting bracket shown here

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# darkroom lighting

you'll notice that there are two 18-inch long 1x2 bridge pieces which are attached crosswise to the base. These are needed only if you are attaching your safelight to overhead floor joists, as I did. These strips of wood bridge the open space between the joists and are attached to the joists by means of suitable wood screws at least 1½ inches long.

## ADJUSTING THE LIGHT OUTPUT

The light described here has been in use for more than a year in a position 12 feet from the enlarger baseboards and about 11 feet from the developer tray; it is located four feet above the main paper storage cabinet. It is normally left at full brightness and serves to light the center of my main working area, which is 15 feet long and 13 feet wide. When working with open paper boxes directly below the light, the dimmer is adjusted so that the light is about half as bright. This is done by guess, just by turning the dimmer control until the light looks right. The papers I use most are Polycontrast Rapid F and graded Ilford Ilfobrome Velvet Stipple, and after a year, I've yet to fog any paper.

## NOW YOU NEED A HYPO LIGHT

Sooner or later you'll want to share your darkroom with an assistant. This means one person should be able to view prints in the hypo while someone else is making an exposure with the enlarger or has a print in the developer tray. To do this you need a shielded white light by which to make final judgment on your prints. Sure, you can make drugstore-quality prints without ever turning on the white light, and I once even worked in an Air Force darkroom where the white lights had been removed completely, but that didn't mean that we did good work, just lots of it. In fact, I don't know one really good printmaker who doesn't check his work by white light, and I've watched some of the world's best.

To make such a light, all you need is a two-foot length of five-inch diameter stovepipe. This is the black steel pipe you buy at the hardware store for taking away smoke from a wood stove.

First coat the inside of the stovepipe with flat black paint. For this, I used Rust-Oleum No. 412 flat black. To apply the paint I simply poured some down the inside of the pipe while it rested at about a 30° angle, with one end in the middle of a pile of newspapers. I then placed the pipe on its side



ALL PHOTOS BY THE AUTHOR



7. Hypo light end plug is a wooden disk which can be cut out with saber saw. Seen from the top, note location of eye screw and entry hole for power cord. The small wire which does not enter hole is ground wire from power cord and is connected to stovepipe by a ¼-inch No. 6 wood screw.

8. Inside of wood disk—disk was turned on lathe to provide a shoulder to stop light, but you can use a straight disk and seal light leaks with black tape.

and rolled it slowly back and forth until the entire interior had a uniform paint coating. The pipe was allowed to stand on end on small wood blocks, so the surplus paint drained out, and air circulated while the paint dried. A little extra paint was added during the first coating. When the first coat was dry, a second coat was applied in the same manner.

A five-inch circle of ¾-inch plywood was fitted to the inside of the pipe,

using an ordinary metal file to adjust the size and shape around the pipe seam. The file was used on the wood, not the pipe. A 5/16-inch hole was drilled off-center in the plywood to allow the power cord to pass through, and an ordinary flat-base socket was attached to the plywood on one side. Before attaching the socket, the plywood was also painted flat black.

A single No. 10 screw eye was placed in the exact center of the outside of the plywood, and the plywood was attached to the stovepipe by means of four ¾-inch No. 6 round-head wood screws. Small holes were drilled through the pipe to accommodate these screws, and a 15-watt bulb was placed in the socket before the plywood was finally fastened in place.



The light is hung with its open end about eight inches above the surface of the hypo, and no other precautions are taken unless someone is actually using the developer tray in the same sink with the hypo. In this case, I place a 12-inch wide piece of opaque plastic on edge between the stop bath and the hypo tray. Obviously, the light is never turned on over the hypo until a print has been submerged in it and left there for about 45 seconds to one minute to clear.

#### HYPOT LIGHT SWITCH

You'll notice that I've glossed over the matter of a switch for the hypo light. I don't really trust the idea of touching any electrical switch with a hand that's wet with highly conductive hypo solution. To avoid this I plug the power cord into a cheap foot switch that is placed beneath the sink in a position where I can't possibly step on it by accident. Switches of this type usually allow you to plug the switch directly into an outlet and provide an additional outlet into which your light or appliance can be plugged. Such switches can be found in electronics stores, electronics mail-order catalogs, surplus stores and on the marked-down counters of photo stores. An alternative is to use an overhead pull-chain switch, but for this, you'll need an additional safety precaution.

To make a pull-chain switch safe for use above a sink or wet area, you must avoid the possibility of ever touching the metal chain. Most permanent pull-chain sockets come with a short section of chain, to the bottom of which is attached a length of white cotton cord about the diameter of chalk line. This cord, when long enough, is perfectly safe if it does not become contaminated by frequent contact with wet, hypo-soaked fingers, but there is a better way. Replace the original cotton cord with a piece of plastic cord made of nylon, polypropylene or similar waterproof material. If in doubt, use a length of 20-pound test nylon monofilament fishing line. If the monofilament won't hang straight, you can tie an empty spool from a 35mm film cassette to the bottom of the cord to act as a handle and weight.

Before making a final installation of the hypo light, you should seal light leaks between the plywood plug and the stovepipe. Use black photo masking tape while checking with the open end of the pipe on the floor, with the light turned on.

To hang the light and adjust its height I placed a No. 10 screw eye in

a floor joist directly above the hypo tray and ran a length of chalk-line cord between it and the eye in the top of the light. By tying the cord to the eye on the light and sliding the cord through the other eye, the light can be moved up and down to any convenient height, then tied off to any appropriate nail, pipe or whatnot. The advantage of this arrangement is that the hypo light can be pulled high above the tray where it is out of the way when working alone in the darkroom but easily lowered into place at any time.

#### SAFETY NOTE

A three-wire grounded appliance cord is called out in the "Parts List." The green ground wire is to be connected to the outside of the bare metal stovepipe. File or sand the metal around one of the wood-screw holes until the bright metal shows through. Remove 1/2 inch of insulation from the end of the green wire, wrap the bare wire around one of the 3/8-inch No. 6 screws and tighten it into the wood. This precaution has been placed at the end of the article so you won't forget the warning. □

#### PARTS LIST

##### VARIABLE SAFELIGHT

- One 10x12-inch OC safelight glass
- Four feet 1x12 clear pine lumber or equivalent plywood (see text)
- Two fixture sockets
- One Add-On lamp cord dimmer switch (200-watt 120-volt Leviton)
- One appliance cord, 2-wire No. 18 size, length to suit your darkroom
- Two 6-32x1/2 stove bolts with nuts
- Two pieces asbestos paper, 4x4 inches or larger
- Ten 1 1/2-inch No. 10 flat-head wood screws
- Twelve 3/8-inch No. 6 round-head wood screws
- One piece 20-gauge galvanized sheet metal 11x13 inches
- Two 1/4-inch carriage bolts, 4 inches long (with nuts and washers)
- Six feet 1x2 clear pine
- One piece 1x8 lumber, 14 1/2 inches long
- One 8-ounce can white paint

##### HYPOT LIGHT

- Two feet 5-inch black tin stovepipe (light-gauge steel)
- One 6x6-inch piece 3/4-inch plywood (for disk)
- One flat-base socket (see photos)
- One 3-strand No. 18 appliance cord with grounded plug
- One 8-ounce can Rust-Oleum No. 412 flat black paint

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# PRODUCT PROOF SHEET



## MAGIC FROM MINOLTA: NEW 110 ZOOM SLR

Minolta Corporation has introduced the new Minolta 110 Zoom SLR—first 110 with through-the-lens viewing and focusing. It has a built-in 25-50mm f/4.5-16 zoom macro Rokkor lens that focuses as close as 11 inches in its macro setting and three feet in normal mode. It has fully automatic aperture-priority exposure control via CdS meter system and a metal-blade, behind-the-lens, electronically governed shutter with stepless speeds from 1/1000 to 10 seconds, plus mechanical X and B settings. Inserting film cartridge automatically keys meter system to proper ASA. Working range of CdS meter system is EV 1-18. A fingertip slide control permits over-riding the exposure up to  $\pm 2$  EV. X flash synch is at 1/150. Lens provides a 2X zoom range and consists of 10 elements in 10 groups. Aperture has full and half-stop detents. Viewing and focusing are at full aperture; accessory eyepiece correction lenses are available. Finder signals include slow shutter yellow LED, overexposure red LED, B and X setting red LED, battery check red LED, and in addition, eyepiece is blocked by internal blind when battery voltage is too low for proper functioning. Mechanical B and X settings allow shooting to continue in such an event. Film is advanced by a short-throw, single- or multiple-stroke thumb lever with 80° winding angle. Additional features include a built-in hot shoe, function-selector dial lock, combined on/off switch and shutter-release lock, cable release and tripod sockets and collapsible soft rubber lens hood. The 5.3x2.9x1.1-inch unit is powered by two 1.5-volt silver oxide batteries (Eveready S-76E or equivalent). Contact Minolta Corporation, 101 Williams Dr., Ramsey, New Jersey 07446, for pricing and availability.



## YANKEE ADDS A LID

Yankee Photo Products has added a new floating lid to their 4x5 utility tank for developing film on hangers. The floating lid greatly retards oxidation. The UF-45 tank holds up to 12 4x5 hangers and carries a suggested retail price of \$6.95. Contact Yankee Photo Products, Inc., 2444 Wilshire Blvd., Suite 501, Santa Monica, California 90403.



## PETRI FA-1 35mm SLR ANNOUNCED

Photo America Corporation (PAC), sole U.S. importer of Petri products, has introduced the fully automatic Petri FA-1 camera with 55mm f/1.7-16 Petri bayonet-mount lens. Its built-in CdS exposure meter has manual override, open aperture metering and viewing, shutter speeds from one to 1/1000 second plus B and a built-in self-timer. Additional features include bright focusing screen, built-in hot-shoe contact and PC socket, FP and X automatic setting, single-stroke rapid advance and 52mm lens accessory size. Contact Photo America Corp., 65 Kelly Street, Elk Grove Village, Illinois 60007, for pricing and additional information.



## 35mm SLR CARRY-CRADLE INTRODUCED BY BHM

Rugged, black anodized die-cast aluminum Carry-Cradle protects vulnerable bottom plate of cameras while retaining accessibility to all controls. It has solid stainless steel rings that will accommodate a variety of straps and vertical side supports that provide a gripping surface on the front edge of camera. Additional features are a flush-to-base brass screw to mount unit to camera securely, camera lens mount support and button on lower front side for use with an accessory elastic body strap. Weighing under six ounces, it will be available in five models to fit popular brands: model 1, for Mamiya MSX, DSX series; model 2, Nikkormat FTN and FT2; model 3, Canon FTb, TLb, TX and Bell & Howell FD35; model 4, Pentax Spotmatic F and SP 1000 and model 5, Minolta SR-T100, 101 and 102. Suggested list price is \$29.95; elastic body strap is \$1.95. Carry-Cradle will be available from Bell & Howell/Mamiya Company dealers. Write BHM at 2201 W. Howard Street, Evanston, Illinois 62022, for information.



## FLIGHTS OF PHOTOGRAPHIC FANCY: KODAK TELE-INSTAMATIC 708

The Kodak Tele-Instamatic 708 camera has two built-in lenses—normal or telephoto—and such convenience features as electronic shutter, silicon cell automatic exposure control and a full three-year warranty. The optical system consists of a three-element 25mm f/5.6 lens for "normal" pictures and a four-element converter lens which forms a seven-element f/5.6 lens with a focal length of 43mm for telephoto shots. The camera automatically selects proper f-stop/shutter speed combination using a "Z" pattern exposure control system. Depending upon the light, camera selects smallest aperture, f/9.3 coupled with fastest shutter speed, 1/300. As light falls off, the camera switches down to 1/125 before changing to the maximum f-stop, f/5.6; at this point, camera selects highest shutter speed possible from 1/300 to 1/30. This exposure control program was designed to improve picture sharpness. An integrated circuit chip, coupled with a fast-acting silicon cell, controls exposure function and f-stop determination. In flash mode camera selects proper f-stop, depending upon focus distance—three to seven feet, f/9.3; beyond seven feet, aperture shifts to f/5.6. Other features include a folding flip-up lens cover, flashtest socket, blinking red light in viewfinder when flash is required, external compartment for one K battery, battery check button and two-stroke, thumb film advance. A product of Eastman Kodak Company, 343 State Street, Rochester, New York 14650, list price of the 708 is \$110.50; camera outfit, \$114.50, includes camera, wriststrap, pressure-sensitive initials, instruction book, battery, one roll Kodacolor C110-20 film and one flashtest.



## TIME-LAPSE MOVIE TIMER AVAILABLE

A solid-state electronic timer combined with a solenoid-driven cable release allows anyone to make exciting time-lapse movies. Frame rates from five fps to one per hour are provided. The unit adapts to any movie camera with single-frame capability and cable-release input. Suggested list price is \$79.50; contact Harmony Electronics, 4719 North Keating, Chicago, Illinois 60630.





#### NEW BABY IN THE BRONICA FAMILY

The Bronica ETR Compact Ideal 120 format camera system represents a significant departure from previous Bronica models. The slightly smaller 42x55mm format makes a more compact and lighter camera possible for greater ease of handling. The ETR delivers 15 exposures on 120-roll film and 30 exposures on 220 film. Width/length ratio of negative closely matches that of standard paper and reproduction sizes. Six Zenzanon lenses from 40 to 500mm will be available; all are multilayer, antireflection coated. Each lens has an individual, mechanically driven, electronically timed Seiko #0 leaf shutter, providing stepless speeds from 1/500 to eight seconds plus B. All lenses can be synched with electronic flash up to 1/500. A single electronic shutter control system is built in to the camera body. The body also has built-in ability for aperture-preferred exposure automation via optional automatic exposure (AE) finder and motorized film advance via optional motor drive attachment. Viewfinder LED system indicates shutter speed settings, plus under- and overexposure warning and exposure adjustments of 1/2X to 2X for spotlight and backlit scenes are possible. Standard focusing screen has a diagonal split-image spot surrounded by a matte collar. Miscellaneous features include a lever-type film advance crank, multiple-exposure lever, time exposure switch, battery-check button and tripod socket. Camera operates on a single six-volt silver oxide battery, Eveready #544 or equivalent. The new ETR complete system camera offers interchangeable lenses, film backs, grips, finders and focusing screens. Black body with 120 magazine, 75mm f/2.8 Zenzanon lens and waist-level finder has a suggested retail price of \$898.50. Contact Bill Giordano, Product Manager, Photo Products Division, Ehrenreich Photo-Optical Industries, Inc., 623 Stewart Avenue, Garden City, New York 11530.



#### MINOX EXPANDS TO 35mm FORMAT

The front flap of the new automatic Minox 35EL serves a multitude of functions. When closed, it protects the lens and viewfinder, conserves the battery by turning off all electronic systems and locks shutter. Opening the front flap and advancing the film activates the meter system; photographer sets aperture, and the camera sets correct shutter speed, which is visible in viewfinder. The bladed electronic shutter has speeds continuously variable from 1/500 to 30 seconds at ASA 25 and 1/500 to one second at ASA 800. The 35mm Color-Minotar lens is made of four elements in a triplet construction with front cell focusing. Focus is from infinity to three feet and is set by rotating a scale on lens front. Two CdS cells on the front of the lens control the exposure automation; they are powered by one 5.6-volt PX-27 battery. The accessory shoe accepts any standard electronic flash or AG-1 bulbs or cubes; flash synch speed is 1/30. The Minox 35EL also features a battery test and tripod sockets; weight is less than seven ounces. Unit has a suggested list price of \$183. For further information, contact Ms. L. Forzani, Minox USA, E. Leitz, Inc., Rockleigh, New Jersey 07647.



#### NEW VIEW FROM 20th CENTURY

The JV-20 plastic page is designed to protect valuable slides from finger marks, dust and scratches. It holds 20 2x2 slides for protection, storage and viewing. Slip-in clear vinyl pockets allow viewing without removal. Minimum quantity available is 50 sheets and one binder for \$15; 100 sheets, two binders, \$25; 200 sheets, four binders, \$46; 500 sheets, 10 binders, \$105, and 1000 sheets, 20 binders for \$180. Contact 20th Century Plastics, Inc., 3628 Crenshaw Blvd., Los Angeles, California 90016, for a free sample.



#### FUJI INTRODUCES C-MOUNT MOVIE CAMERA

The Fujica Single-8 ZC 1000 is designed to provide 8mm photographers with the precision and versatility available in 16mm and 35mm photography. By incorporating standard C-mount for lenses, the ZC 1000 accepts literally hundreds of lenses, including 35mm still camera lenses with suitable adapters. The lens supplied is a 7.5-75mm EBC Fujinon MA.Z 1/1.8 macro zoom lens with 10:1 zoom ratio. Focusing is from infinity to the front of the lens. Shooting speeds range from 12 to 72 fps with intermediate speeds of 18, 24 and 36 fps. Specialized features include a motorized reverse for rewinding so film can be quickly and accurately rewound to any length, single-frame forward and reverse for animation or time-lapse photography and a manual crank for advancing film by hand with one turn equaling one frame advance. When filming in extremely low light, film can be cranked by hand at very slow speeds (two to four fps) for adequate exposure or used for filming under extreme cold where battery pack might be frozen out of action. The shutter angle can be varied by hand from 0 to 160° with locking positions at 0 (open), S (start), 2 (80°) and 4 (40°) for smooth fade-ins and fade-outs and precision lap-dissolves. The behind-the-lens meter has provision for one or two stops extra exposure; scale in the viewfinder indicates exposure setting. The Fuji design viewfinder, a reciprocating mirror located in front of shutter, provides a bright view and insures optimum light reaching the film. Focusing is done on a ground-glass screen, which can be removed for a brighter view of the subject. Viewfinder shows exposure indicator on right side and an LED which flashes to warn of four different functions and glows steadily when batteries are exhausted. The ZC 1000 has a three-place digital counter as well as a regular footage counter. Distributed in the U.S. by Fuji Photo Film U.S.A., Inc., 350 Fifth Avenue, New York, New York 10001, the Fujica Single-8 ZC 1000 has a suggested retail price of \$1249.

(Continued on page 90)

Please mention PhotoGraphic Magazine when inquiring to manufacturers about the items listed in "Product Proof Sheet."

New product information should be sent to the attention of Karen Geller, Managing Editor, PhotoGraphic Magazine, 8490 Sunset Boulevard, Los Angeles, California 90069.



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### PRODUCT PROOF SHEET

(Continued from page 89)



#### DELUXE 110 KIT FEATURES COPAL 400 CAMERA

Copal Corporation of America has introduced a deluxe 110 kit which includes the Copal 400 pocket camera, Copal Mini-electronic flash Model 180, Copal Mini-tripod, carrying case, flashcube extender, carrying cord and batteries for the suggested list price of \$94.95. The 400 has a 28mm f/8 three-element optical glass lens and zone focusing plus electronic shutter and long-exposure LED warning light. The Model 180 flash features a hot shoe, built-in flash tester, a guide number of 30 for ASA 25 film, 60° angle of illumination and a flash duration of 1/2000 second. Powered by two AA size batteries, it will give approximately 150 flashes with a recycle time of eight to nine seconds. For more information, write to Copal Corporation of America, 58-25 Queens Boulevard, Woodside, New York 11377.



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#### NEW TYPE 6x6 CP FILTERS FROM UNICOLOR

New Unicolor 6x6-inch color printing filter set is packaged in a cardboard filter folio which provides room for filter pack information. Filter factors and magnification data are included for user reference. Unicolor's new Mylar filters are almost impervious to the warp and scratch problems encountered with the old acetate type. The set provides a maximum of 227.5 units of magenta and yellow and 77.5 units of cyan plus an ultraviolet filter. Two additional features included are a template, which makes filter trimming easier and faster, and self-stick tabs to make filter value and color more readily identifiable. The Unicolor 6x6 color printing filter set has a suggested list price of \$24.99. Contact Unicolor Division, Photo Systems, Inc., 7200 Huron River Drive, Dexter, Michigan 48130.



#### NEW CANON 600mm 1/4.5 LENS OFFERED

The FD 600mm 1/4.5-16 S.S.C. Canon super telephoto lens with automatic diaphragm is equipped with FD breech-lock lens mount for the Canon F-1 and also fits the FTb and TX cameras. Lens works with auto exposure systems of Canon EF and F-1 equipped with Servo EE Finder. It has a horizontal angle of view of 3° 30' and vertical view of 2° 20'; construction is six elements in five groups. A rear group focusing system accounts for the comparative compactness of lens—only 18 inches long. Rotational torque of the rack and pinion focusing wheel is adjustable; focusing is from 27 feet to infinity. Additional features include a filter slot for Canon 48mm filters at rear of lens, built-in retractable lens hood and four tripod sockets. For price and availability contact Canon U.S.A., Inc., 10 Nevada Drive, Lake Success, New York 11040.



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The Bausch & Lomb Discoverer Zoom 60 telescope does double duty as a 1000 to 4000mm zoom lens. With the addition of two inexpensive accessories the Discoverer will attach to a 35mm single-lens reflex camera with interchangeable lenses. In addition, it will attach easily to any tripod via a threaded lug which is part of its body. Its aluminum casting with beige crinkled enamel finish is almost impervious to chipping and abrasion. The Discoverer Zoom 60 telescope has a suggested retail price of \$224.50; the telephoto adapter is \$12.95, and the camera body adapter, up to \$6.75 depending upon camera mount. Contact Bushnell Optical Company, Division of Bausch & Lomb, 2828 East Foothill Blvd., Pasadena, California 91107, for more information.

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## TOKYO NOTEBOOK

M. A. HADLEY

### CAMERA SHOW HIGHLIGHTS



□ Every year in Tokyo, Japan, the Japanese camera industry puts on a photographic trade show, the content of which draws camera buffs from every region of this island country.

Thousands of photo fans have the opportunity to preview new products, many of which are guaranteed to boggle the mind, whet the appetite and put a dent in the family budget.

No matter, though, because it is all in good fun, and so it was that this reporter was counted among the milling thousands, as glassy-eyed and eager as anyone else in the crowd. And now that I've come down back to earth, so to speak, I'd like to pass along some of the more interesting items that I saw, many of which will, no doubt, be on the American market in short order.

First, it didn't take a mental giant to figure that Fuji Photo Film Co., Ltd., still had a trick or two up its corporate sleeve when it didn't jump on the super 8 sound bandwagon. Like any good magician with a flair for the dramatic, Fuji pulled the wraps from *four* new *single 8 magnetic* sound-on-film movie cameras. This included the model AXM-100 with a fixed 11mm f/1.2 lens and model ZXM-300 with a 9.7mm-27mm f/1.2 zoom lens. These two models are now available from dealers in Japan. However, there were two other models, reference models for later marketing, designated ZXM-500 and ZXM-800. Specifications for the latter two cameras include EE control to f/45, auto level control (ALC) for sound recording with power supplied by four penlight (AA) batteries, 18 fps for silent films, 24 fps for sound and a 220° shutter.

Chinon, another leading light in the sound-movie spectrum, revealed two new models, the 506-SM and the 806-SM, scheduled for sale in Japan by May 1 (Chinon movie cameras will shortly be available in the United States). Come late September, Chinon will introduce two sensational sound projectors—the Chinon Sound 9000 (magnetic and optical sound reproduction) and the Chinon Sound 8500 (magnetic sound reproduction).

In April, both in Japan and the United States, Bell & Howell/Mamiya Company will introduce their Model 1238 8X zoom super 8 sound movie camera with an f/1.8 lens. Asked whether BHMC would introduce a single 8 sound camera, a company representative said, "Maybe, maybe not. We'll have to think about it." As of April, BHMC begins marketing its Model 498 magnetic and optical sound projector, with a 15mm-30mm f/1.3 zoom lens.



Contax RTS owner, left, is apparently taken aback by the price tag on the new Zeiss 1000mm f/5.6 catadioptric (mirror) lens at the 1976 Tokyo Camera Show. U.S. price was quoted as \$22,000. © M.A. Hadley.

Asked about the relatively high price (165,000 yen), the same company spokesman pointed out that the projector is of die-cast material, not inexpensive plastic.

It took every last ounce of my determined body, plus a couple of sharp elbows, to buck the crowd at the Nippon Kogaku K.K. (Nikon) exhibit. However, once there, all I could do was to stand and gaze with rapture at the plethora of products, many of which will, I'm sure, be in my future. The most expensive new item on display (U.S. projected price, \$8000) was the special order (limited supply only) 13mm f/5.6 Nikkor super wide-angle lens. This was followed by a 28mm f/2 Nikkor, 35mm f/2 Nikkor, 135mm f/3.5 Nikkor, 135mm f/2 Nikkor and a 105mm f/4 Micro Nikkor.

Nature and close-up enthusiasts will welcome the belated offering of Nikon Auto Rings PK-1 (8mm), PK-2 (14mm) and PK-3 (27.5mm) and an auto ring for their bellows and companion double-cable release. Also offered is an extension ring for the 105mm Micro Nikkor.

With rest and refreshment in mind I shouldered my way through the milling mob to a restaurant on the same floor, where I encountered Al Numano, Yashica's sales representative for the new Contax RTS system. He was taking a respite from the barrage of questions being hurled at him from a crowd estimated to be six- to 10-deep at his exhibit. Taking the opportunity to query



him, he began to describe the superb results obtained with the now-available Zeiss catadioptric (mirror) lenses. Numano-San said that the new wide-aperture "cats" had built-in neutral density filters for aperture equivalents of f/8 and f/11. The 500mm f/4.5 with bellows and double rail is U.S. tagged at over \$10,000. The 1000mm f/5.6 fetches a handsome \$22,000.

At the Mamiya booth I found a 70mm film back for the Mamiya RB67. Price, availability and features are big question marks as was the availability of a motor drive for Miranda's DX-3, plus a radio remote control and a 250-exposure back. Miranda, too, could not give precise delivery dates or exact price information.

Konica's Kazuo Ogasawara and K. Hishida assured me that nothing was new with Konica, despite the unfortunate allegation about a Konica/Dominick marriage mentioned in another U.S. publication. They denounced the magazine's "exclusive" as nothing more than self-serving journalism. The Konica Autoreflex T-3 and Konica's C35EF (with built-in pop-up flash) are doing extremely well. Konica is eminently pleased with the camera buyers' acceptance of the current line and foresees nothing radically new.

Two other motor drives were exhibited, one from Minolta and one from Pentax. The new Pentax K2 DMD motor drive camera with motor drive unit is an all-black unit with a chopped motor housing like the Olympus OM-2, although thicker and with the conventional battery-case trigger housing of earlier Pentax models. A data back was also shown for this model.

As mentioned, Minolta showed their fixed-motor Minolta X-1 unit that has a projected end-of-June sale date. The unit will be available without lens but with the AE finder.

At the next booth, Sigma was showing their 200mm f/3.5 Scalematic lens, which was placed on sale as of the show. The also-new Sigma 24mm f/2.8 Filtermatic lens, on sale at the end of February 1976, was also gaining user interest. Sigma lenses are, perhaps, some of the most innovative I have ever seen to date.

Not to be overlooked was the newly introduced "baby" Bronica, the Bronica ETR. The compact camera uses 120 roll film and boasts a "perfect format" of 42x55mm. Each of the six interchangeable Zenanon lenses features an electronically timed Seiko #0 leaf shutter. Features include interchangeable backs, interchangeable focusing screens, interchangeable viewfinders, etc. A motor drive is predicted in the near future. This compact 120 film camera drew a lot of interest. You'll be hearing more about this one in future columns. □

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# BICENTENNIAL NEWS



The City of Wilmington, Delaware, needs *your* help with a unique program called **Bicentennial Metroscope**. This is a government-funded program; however, grants do not completely cover supplies and equipment. The scope of the project is this: funds from the Comprehensive Employment and Training Act (CETA) and a grant from the American Revolution Bicentennial Administration (ARBA) will be supporting Metroscope, which will employ 16 people, including six photographer-teachers, a technical staff of five and five persons in related disciplines all working together to teach photography and to bring the arts within easy reach of the community.

Metroscope will sponsor exhibitions and discussions using photography to help people better understand each other; it will also produce publications, slide shows, etc. Individual students will be encouraged to pursue their personal interests in photography—from pleasure to job enhancement, from aesthetics to chemistry. Students will be taught in as many as 10 different neighborhood centers, schools and community meeting places. The group of students in each center will develop projects which combine individuals' interests to reflect their neighborhood. They might, for example, record change and the need for change in housing; they might document neighborhood celebrations, show the jobs in their neighborhood or its history or its contribution to the city or county. Metroscope centers will encourage racial and cultural exchange.

Eventually, with guidance from the Metroscope staff, city and countywide projects will be developed. But because Metroscope's funds are primarily devoted to creating new jobs and because the funds are limited, it is looking for all kinds of help—from individuals, community organizations, businesses, etc. Tax-deductible contributions of money and photographic equipment and supplies can be sent to: Ms. Cynthia H. Burt, Program Coordinator in the Arts, 1314 Market Street, Wilmington, Delaware 19801; phone number is (302) 571-4285.

Please address all submissions and releases for "Bicentennial News" to Bicentennial Editor, c/o Petersen's PhotoGraphic Magazine, 8490 Sunset Blvd., Los Angeles, California 90069.



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# ONE TO ONE

DAVID B. BROOKS

## IMPATIENCE AND LAZINESS CAN BE VIRTUES

"In my estimation darkroom work is boring busywork, but I just can't get away from it. If I take pictures of a friend, invariably there is some reason for a request for a black-and-white print. I've tried the RC papers, and they do make things a little easier, but what I would really like is a way to make a good black-and-white enlargement without having to lose a whole evening in the darkroom."—Jack Latimer, Dallas, Texas.



□ Many of the technological advances that we enjoy would never have come into existence without the kind of impatience that has become the American virtue of not letting well enough alone. Thanks to people like Dr. Land of Polaroid, Ellis Peck and his Insta-Print line of stabilization products and Eastman Kodak's many technicians, you can combine two rapid systems to produce very professional-quality black-and-white enlargements.

Gone are the days when the phrase "quick and dirty" had meaning in professional photographic circles. By using Polaroid's Type 55 or 105 Positive/Negative Film, you can have a very printable negative minutes after making an exposure. Type 55 is a 4x5-size film in individual sheets with a speed of ASA 50. It can be exposed in any camera that will accept the Polaroid 4x5 adapter, including virtually all 4x5 view- and press-type cameras. Type 105 film comes in a pack and has an ASA of 80. It can be exposed in many 120 film size cameras for which Polaroid adapters are available, including Hasselblad, Bronica, Mamiya and Linhof to name a few, as well as Polaroid's model 195 camera. With a pack adapter Type 105 can also be used with view- and press-type cameras.

The Type 55 or 105 negative is developed along with the print in 20 seconds in the same manner as other Polaroid films. Thereafter, a short soak in a sodium sulphite solution is necessary to remove the developing agent. Polaroid has a handy tank with a special holder

for eight negatives to make this process efficient and easy. Then a quick wash and dunk in a wetting agent solution make the negative ready to hang up and dry. A blower-type hair dryer will shorten the usual drying time.

If your camerawork is up to par, you should have a negative that is exceedingly sharp and fine grained. With average contrast subjects that are evenly lit the Polaroid negative will print a full range of tones on normal contrast paper using most condenser enlargers.

To make the enlarging process equally short, the stabilization process is the answer. Peck Sales Company (7326 Laurel Canyon Blvd., North Hollywood, California 91605) Insta-Print processor and stabilization materials are modestly priced, easily within the budgets of most enthusiasts. A stabilization processor uses two solutions, an activator and a stabilizer. Rollers turned by a small electric motor in the processor move the enlarging paper through the machine after it has been exposed in the enlarger, taking only a few seconds to com-



It seems only logical to combine the instantly produced negative of Polaroid's Type 55/105 film and stabilization printing for super speedy enlargements.

pletely develop and stabilize the image. The print that comes out of the machine is fully processed and almost dry. Lay it on a screen for a few minutes to finish drying, and you can then present it to anyone with pride.

It is even possible to use normal enlarging paper with a short bath in Insta-Print Plus before processing in the stabilization processor. Even warm-tone portrait papers with the warm-tone activator, also available from Peck Sales, can be used. The stabilized print, whether you use a stabilization paper or normal paper with Plus, will have the range of tones and all other qualities you would expect of a normally processed enlarging paper—with one important exception.

Unless you take the additional time to fix the stabilized print in a hypo solution and wash and dry it like a normal print, its life will be somewhat

shorter than the conventional black-and-white print. But according to Ellis Peck, with reasonable storage conditions the life of a stabilized print processed in his chemicals can be as long as five years.

If variable contrast enlarging papers are your bag, Eastman Kodak makes an excellent stabilization paper in three weights and with three different surfaces—Ektamatic SC. This paper may be exposed using Polycontrast filters to obtain a full range of contrasts. Of all the papers Kodak produces, you may find, as I did, that Ektamatic SC has the brightest whites and deepest blacks imaginable. It is capable of reproducing everything you would expect from your best negatives by either stabilization processing or normal development in Dektol or D-72 1:2 with regular processing in a stop bath and hypo followed by washing and drying.

Using the same care you would in conventional negative making, with Polaroid Type 55 or 105 Positive/Negative film combined with stabilization print, you can expect your usual quality enlargement in as little as 15 or 20 minutes from exposure of the film to processed print. In addition to getting you out of the darkroom in plenty of time to catch your favorite TV program, there are some ancillary advantages unique to working with Polaroid negatives and stabilization printing well worth exploration.

Beyond the assurance provided of being able to check negative density and contrast immediately after making a Polaroid exposure, it's easy to see the relationship between the scene in the viewfinder and the resulting negative. Relating these usually disparate elements in time significantly sharpens your ability to previsualize a real scene and its optical representation in terms of black-and-white negative tone values. This experience is also an ideal opportunity to refine your technique, using a light meter to obtain predictable negative exposure.

Stabilization printing can also provide a useful learning experience. With conventional printing it is all too easy to adjust print density by shortening or lengthening development. The fixed working speed of the stabilization processor requires that an exact exposure be made with the enlarger. When working with stabilization, discipline is needed to determine printing exposures precisely. Its benefits will become apparent when you experience the print quality and creative control when using conventional enlarging materials and processing. If I were to teach a course in black-and-white photography, I would use Polaroid Positive/Negative film and stabilization printing to demonstrate the functions of exposure control. □



Photography by William Albert Allard in Brooklyn, N.Y. and off the Atlantic Coast using Fujichrome R100 film.



# America

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